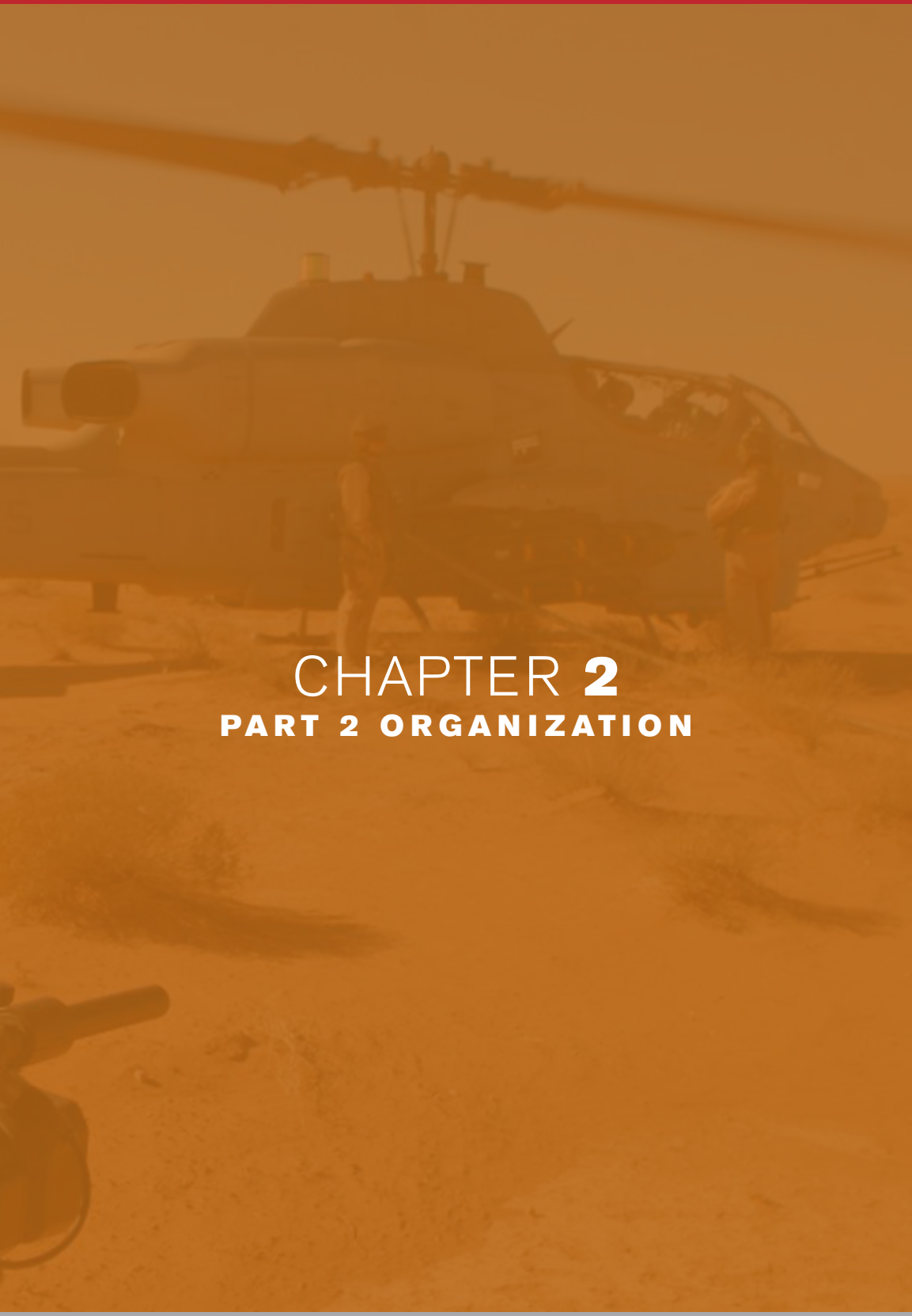
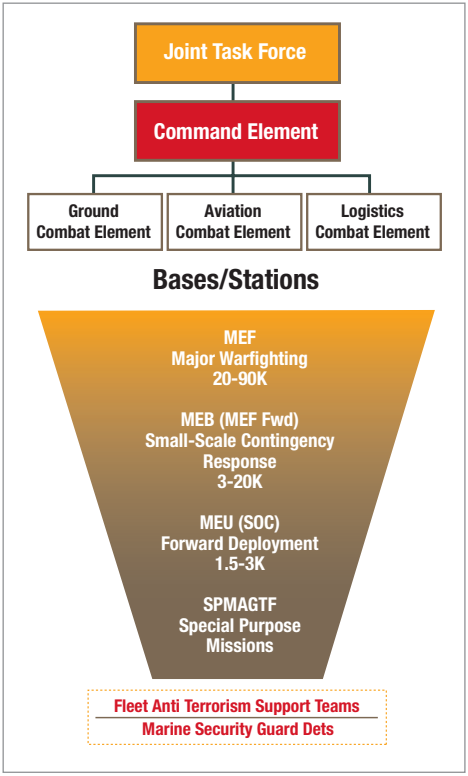


CHAPTER 2
PART 2 ORGANIZATION

MARINE AIR GROUND TASK FORCE (MAGTF)

The MAGTF is the Marine Corps' principle organization for conducting missions across the spectrum of military operations. MAGTFs provide combatant commanders or joint task force commanders with scalable, versatile expeditionary forces able to respond to a broad range of crisis and conflict situations. They are balanced, combined-arms force packages containing organic command, ground, aviation, and sustainment elements. A single commander leads and coordinates this combined-arms team from peacetime training through deployment. MAGTF teams live and train together, further increasing their cohesion and fighting power.



MAGTF CAPABILITIES

The naval character of MAGTFs enhances their global mobility, lethality, and staying power. Embarked aboard amphibious ships, forward-deployed MAGTFs provide U.S. civilian and military leaders with the ability to do the following:

- Move forces into crisis areas without revealing their exact destinations or intentions;
- Provide continuous presence from secure sea bases in international waters;
- Provide immediate national response in support of humanitarian and natural-disaster relief operations;
- Provide credible but non-provocative combat power over-the-horizon of a potential adversary for rapid employment as the initial response to crisis;
- Support diplomatic processes for peaceful crisis-resolution before employing immediate response combat forces;
- Project measured degrees of combat power ashore—at night and under adverse weather conditions, if required;
- Introduce additional forces sequentially into a theater of operations;
- Operate independent of established airfields, basing agreements, and over-flight rights;
- Conduct combat operations ashore, using

inherent combat service support that is brought into the theater of operations;
- Enable the introductions of follow-on MAGTF or joint and/or combined forces by securing staging areas ashore;
- Operate in rural and urban environments, and during hostile nuclear, biological, and chemical situations;
- Withdraw rapidly at the conclusion of operations or remain to help restore stability to the affected areas; and,
- Plan and commence execution of a mission within six to 48 hours of receiving a warning order.

Along with the MAGTF, other special-purpose forces introduce additional depth to Marine Corps capabilities in support of joint operations.

MAGTF COMPOSITION

The Marine Corps task-organizes for combat in accordance with its statutory mandate to "...provide forces of combined arms, including aviation..." by forming integrated, combined-arms MAGTFs. As the name indicates, MAGTFs are task-organized and specifically tailored by mission, as well as for rapid deployment by air and/or sea. However, no matter what their mission or mode of deployment, MAGTFs are comprised of four deployable elements, supported by the fifth element—our bases and stations.

Command Element (CE): The CE contains the MAGTF headquarters and other units that provide intelligence, communications, and administrative support. As with all other elements of the MAGTF, the CE is scalable and task-organized to provide the command, control, communications, computers, intelligence (C4I), and joint interoperability necessary for effective planning and execution of operations.

Ground Combat Element (GCE): The GCE is task-organized to conduct ground operations to support the MAGTF mission. This element includes infantry, artillery, reconnaissance, armor, light armor, assault amphibian, engineer, and other forces, as needed. The GCE can vary in size and composition. It can consist of a light, air-transportable battalion; a relatively heavy and mechanized unit that includes one or more Marine, Army, or allied divisions; or, another type of Marine Corps ground combat unit that meets the demands of a particular mission.

Aviation Combat Element (ACE): The ACE conducts offensive and defensive air operations and is task-organized to perform those functions of Marine aviation required to support the MAGTF mission. This element is formed around an aviation headquarters with appropriate air-control agencies, combat, combat support, and combat service support units. The ACE can vary in size and composition from an aviation detachment of specifically required aircraft to one or more Marine Aircraft Wings (MAWs).

Logistics Combat Eement (LCE): The LCE is task-organized to provide the full range of combat logistics functions and capabilities necessary to maintain the continued readiness and sustainability of the MAGTF as a whole. It is formed around a combat service support headquarters and may vary in size and composition from a support detachment to one or more Marine Logistics Groups (MLGs).

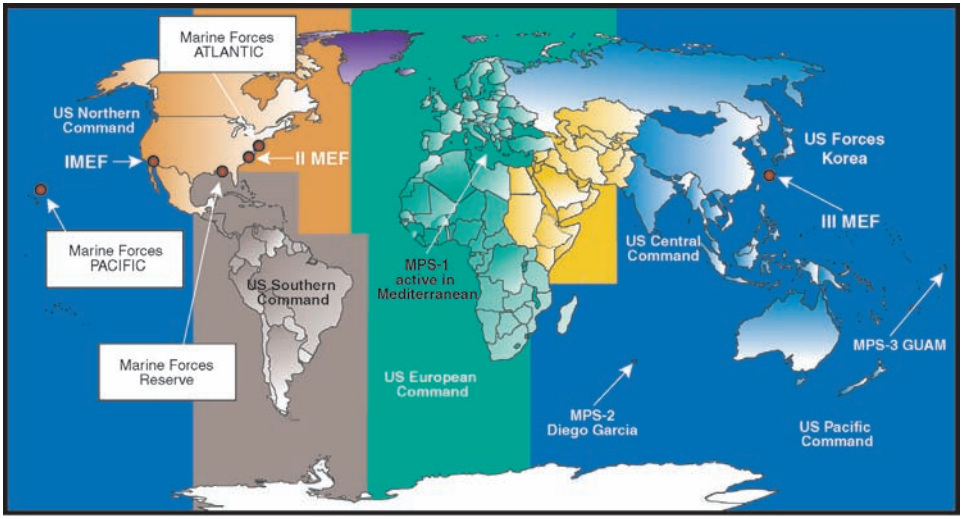
TYPES OF MAGTFS

Four types of MAGTFs can be task-organized as follows: the Marine Expeditionary Force, Marine Expeditionary Brigade, Marine Expeditionary Unit (Special Operations Capable), and Special Purpose.

Marine Expeditionary Force (MEF): The MEF is the principal Marine Corps warfighting organization, particularly during larger crises or contingencies. It is normally commanded by a lieutenant general. A MEF can range in size from less than one to multiple divisions and aircraft wings, together with one or more Marine Logistics Groups. Equipped with 60 days of supplies, MEFs are capable of both amphibious operations and sustained operations ashore in any geographic environment. With appropriate augmentation, the MEF command element is capable of performing as a Joint Task Force (JTF) headquarters.

MEFs are the primary "standing MAGTFs" that exist in peacetime, as well as wartime. Currently, the Marine Corps is organized with three standing MEFs, each with a Marine Division (MARDIV), MAW, and MLG. The 1st Marine Expeditionary Force (I MEF) is located at bases in California and Arizona. The 2nd Marine Expeditionary Force (II MEF) is located at bases in North Carolina and

Locations of MEFs, Maritime Prepositioning Ship Squadrons, and MARFORS



South Carolina. The 3rd Marine Expeditionary Force (III MEF) is based in Okinawa, mainland Japan, and Hawaii.

MEFs remain the "cradles" or "reservoirs" from which all other Marine Corps capabilities emanate. Marine component headquarters, MARFORCOM or MARFORPAC, may form smaller MAGTFs from these MEFs. A MEF will normally deploy in echelon and will designate its lead element as the MEF (Forward).

Marine Expeditionary Brigade (MEB): The MEB is the mid-sized MAGTF (up to 20,000 Marines) that is normally commanded by a brigadier general. The MEB provides transitional capability between the forward-deployed MEU and the MEF, which is our principal warfighting force. A reinforced infantry regiment, a composite Marine Aircraft Group (MAG), and a Combat Logistics Regiment (CLR) will comprise a notional MEB. The command element of the MEB is embedded within the command element of its parent MEF; the deputy MEF commander serves as the MEB commander.

MEBs provide supported combatant commanders with a scalable, warfighting capability across the spectrum of military operations. As an expeditionary force, it is capable of rapid deployment and employment via amphibious shipping (normally 15 amphibious ships, including five large-deck amphibious assault ships), strategic air/sea-lift, geographic or maritime pre-positioning force assets, or any combination thereof. With 30 days of accompanying supplies, MEBs can conduct amphibious assault and sustained operations ashore in any geographic environment.

A MEB can operate independently or serve as the forward echelon of a MEF. With additional MEF Command Element augmentation, a MEB is also capable of acting as a JTF headquarters. Currently, the 1st, 2nd, and 3rd MEB Command Elements are embedded within the CEs of I, II, and III MEF, respectively.

Marine Expeditionary Unit (Special Operations Capable), or MEU(SOC): Forward-deployed MEU(SOC)s embarked aboard Expeditionary Strike Groups (ESGs) operate continuously in the areas of responsibility of various unified combatant commanders. These units provide the President and the unified combatant commanders with forward-deployed units that can conduct a variety of quick reaction, sea-based, crisis-response options in either a conventional amphibious/expeditionary role or in the execution of maritime special operations.

The MEU is commanded by a colonel and deploys with 15 days of accompanying supplies.

Prior to deployment, a MEU undergoes an intensive six-month training program, focusing on its conventional and selected maritime special operations missions. The training culminates with a thorough evaluation and certification as "Special Operations Capable." In addition to possessing conventional capabilities, MEU(SOC)s are augmented with selected detachments to provide enhanced capabilities. These special capabilities include:

- Amphibious operations;
- Direct action;
- Tactical recovery of aircraft and personnel;
- Intelligence, surveillance, and reconnaissance;
- Airfield/port seizure;
- Non-combatant evacuations;
- Humanitarian aid/disaster relief; and,
- Supporting arms coordination.

COMMARFORCOM and COMMARFORPAC routinely maintain foward-deployed MEU(SOC)s in the Mediterranean, Arabian Gulf, and Pacific regions.

Special Purpose MAGTF (SPMAGTF): A SPMAGTF is task-organized to accomplish a specific mission, operation, or regionally focused exercise. As such, SPMAGTFs can be organized, trained, and equipped to conduct a wide variety of expeditionary operations, ranging from crisis-response to training exercises and peacetime missions. They are designated as SPMAGTF with a mission, location, or exercise name, for example, "SPMAGTF (X)," "SPMAGTF Somalia," "SPMAGTF UNITAS," or "SPMAGTF Dade County." Their duties cover the spectrum from non-combatant evacuation to disaster relief and humanitarian missions.

MAGTF SUSTAINABILITY

A fundamental characteristic of a MAGTF is its ability to operate for extended periods as an expeditionary force, relying on internal resources for sustainment. All MAGTFs have inherent sustainability that allows them to be self-sufficient for planned periods. Larger MAGTFs have a deeper, broader, and more capable organic support capability. Different sized MAGTFs deploy with sufficient accompanying supplies to support joint operations.

MAGTFs can augment their organic sustainability by using external support from Navy organizations, host nation support (HNS) agreements, inter-service support agreements (ISSAs), and in-theater cross-service support.

MARITIME PREPOSITIONING FORCE (MPF)

The Maritime Prepositioning Force is a strategic power-projection capability that combines the lift capacity, flexibility, and responsiveness of surface ships with the speed of strategic airlift. Strategically positioned around the globe, the Maritime Pre-positioning Ships (MPS) of the MPF provide Geographic Combatant Commanders (GCC) with forward presence and rapid crisis-response. The MPF is organized into three Maritime Prepositioning Ships Squadrons (MPSRON): MPSRON-1, based in the Mediterranean; MPSRON-2, based at Diego Garcia in the Indian Ocean; and, MPSRON-3, based in the Guam-Saipan area. These three interoperable MPSRONs are each designed

to couple with a Fly-In-Echelon (FIE) to support the rapid closure of a Marine Expeditionary Brigade (MEB). MPF can also support smaller or larger MAGTFs by employing as few as one or as many as 16 MPS.

When needed, these ships move to a crisis region and offload either in port or in-stream. Offloaded equipment and supplies are then married up with Marines arriving at nearby airfields. The end result is a combat-ready MAGTF rapidly established ashore, using minimal reception facilities. The MAGTF combat capability provided by MPF supports GCC military operations that defeat adversaries and win wars, but can also support regional crises that involve humanitarian assistance and disaster relief.

MAGTF deployment planning and training is conducted by the Commanding Generals, II MEF (MPSRON 1); I MEF (MPSRON 2); and III MEF (MPSRON 3). The Commander, Marine Corps Logistics Command (MARFORLOGCOM) primarily through Blount Island Command (BICMD) is responsible for obtaining, prepositioning, and maintaining MPF supplies and equipment. This is conducted in conjunction with operating forces through a maintenance cycle program conducted at the BICMD facility in Jacksonville, FL. The MPS are government owned or long term leased and operated under charters to Military Sealift Command (MSC).

UNIQUE UNIFIED COMMANDER SUPPORT

A combatant commander or subordinate joint force commander may also require Marine forces that do not possess all elements of a MAGTF. These forces are not given a MAGTF designation. Examples are installation security forces, engineer and medical support teams for humanitarian operations, deployments for training, law enforcement operations, and mobile training teams. In these cases, forces will be designated by the name of the senior headquarters having operational control, for example, 1st Combat Engineer Battalion (Rein), 1st Marine Division.

OTHER SPECIAL-PURPOSE MARINE CORPS FORCES

The MAGTFs discussed above provide a continuum of capabilities to support naval, unified combatant commander, and national requirements. These MAGTFs are joined by other unique Marine forces to help the Corps deal with a full range of conventional and unconventional threats and assignments.

AIR CONTINGENCY FORCES

Both COMMARFORPAC and COMMARFORLANT maintain Air Contingency MAGTFs (ACM) in a continuous state of readiness. ACMs are air-deployable forces available to the unified combatant commanders, whose lead elements are prepared to deploy on short notice. The ACMs provide great versatility in

that they can be used as part of the fly-in echelon of a MPF, as reinforcement for an amphibious force, or as the lead element of a MEF.

The ACM will be task-organized to meet the mission, the threat, and airlift availability. The size of the GCE can range from a reinforced rifle company plus a battalion headquarters element, to a regimental-size force consisting of a regimental headquarters, two infantry battalions, a two-battery artillery battalion, a two-platoon reconnaissance company, a two-platoon engineer company, and appropriate aviation and logistics combat elements.

MARINE CORPS PREPOSITIONING PROGRAM – NORWAY (MCPP-N)

Marine Corps Prepositioning Program-Norway enhances all Geographic Combatant Commanders (GCCs) operational responsiveness by providing mission-tailored, prepositioned war reserve materiel that supports global Marine Corps expeditionary operations up to military operations other than war not involving use/threat of force, i.e., lower end of the range of military operations. MCPP-N's prepositioned war reserve materiel is stored in six caves sites and two airfields throughout Norway and is available for rapid preparation and marshalling to aerial/sea/rail ports of debarkation in support of deploying MAGTFs. Forward prepositioned war reserve materiel reduces reaction time and CONUS-based lift requirements.

SUPPORTING ESTABLISHMENT

Marine Corps bases and stations, often referred to as the 5th element of the MAGTF, consist of those personnel, bases, and activities that support the Marine Corps' operating forces. This infrastructure consists primarily of 15 major bases and stations in the United States and Japan, as well as the personnel, equipment, and facilities required to operate them.

The supporting establishment also includes the Marine Corps Recruiting Command, Marine Corps Combat Development Command, and Marine Corps Logistics Command, as well as all training activities and formal schools. Additionally, the establishment includes those civilian activities and agencies that support the Marine Forces.

MARINE CORPS TOTAL FORCE

There is a direct relationship between the size of the Marine Corps and the contribution made to our national defense. Large-scale deployments, operations, and training exercises with allies are part of our training and presence requirements in peacetime. A large percentage of our operating forces are forward-deployed in support of the Global War on Terrorism (GWOT), operations in the Arabian Gulf, and many other U.S. efforts and commitments. This has led to a high-deployment tempo and the demand for a sufficient rotation base back in the United States. This requirement will likely continue for the foreseeable future.

HOW THE MARINES ARE ORGANIZED

The United States Marine Corps is organized as a "force-in-readiness," one that is able to support a wide range of national military requirements. The service is divided into three broad categories:

- Headquarters Marine Corps;
- Operating forces; and,
- Reserves.

HEADQUARTERS MARINE CORPS

Headquarters, US Marine Corps (HQMC) consists of the Commandant of the Marine Corps and those staff agencies that advise and assist him in discharging his responsibilities prescribed by law and higher authority. The Commandant is directly responsible to the Secretary of the Navy for the total performance of the Marine Corps. This includes the administration, discipline, internal organization, training, requirements, efficiency, and readiness of the service. The Commandant also is responsible for the operation of the Marine Corps material support system.

OPERATING FORCES

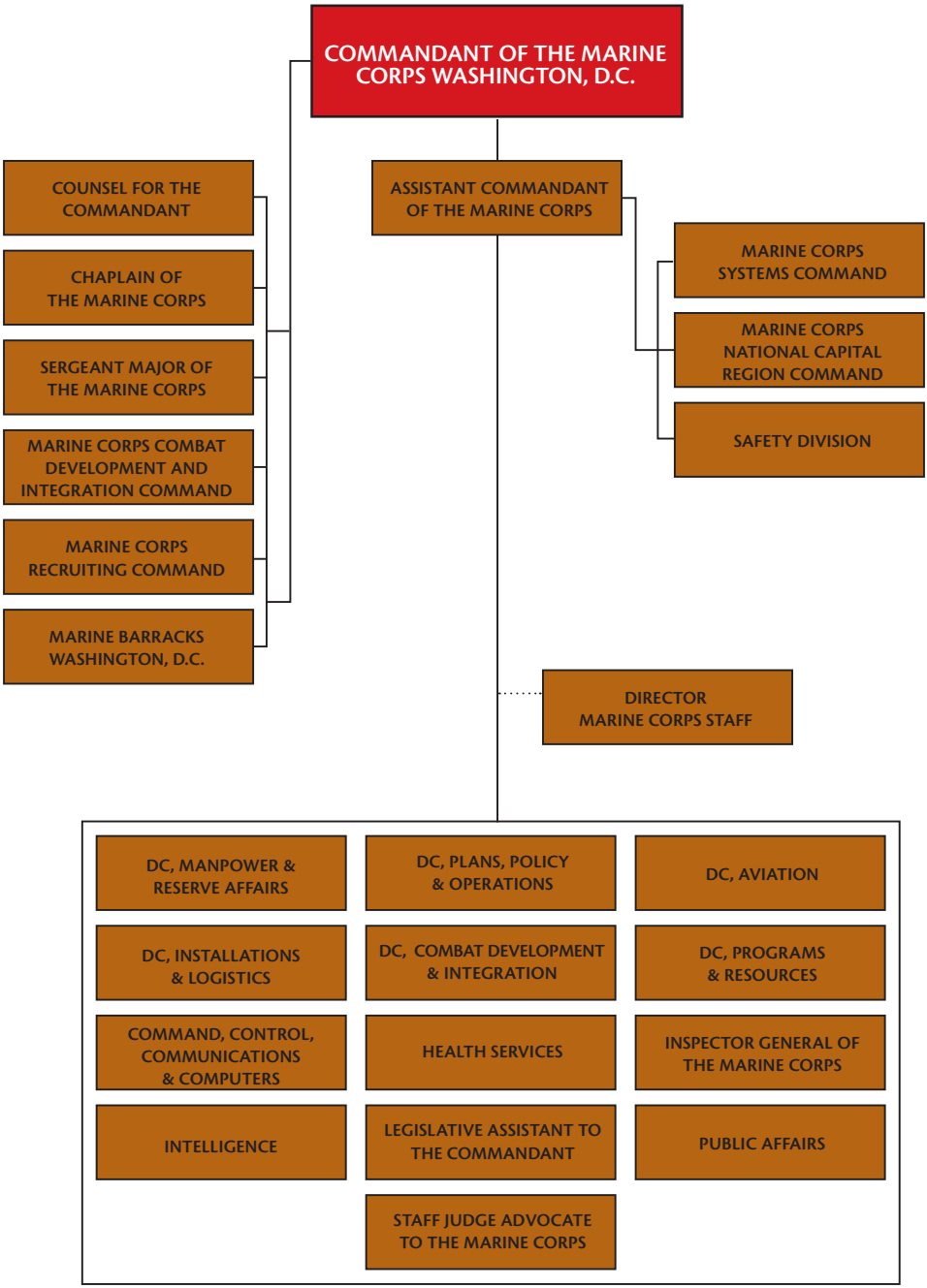
Operating forces—the heart of the Marine Corps—comprise the forward-presence, crisis-response, and fighting power that the Corps makes available to U.S. unified combatant commanders. The Marine Corps has permanently established two combatant command-level service components in support of Unified Commands with significant Marine forces assigned: U.S. Marine Corps Forces Command (MARFORCOM) and Marine Corps Forces, Pacific (MARFORPAC). The Commander, U.S. Marine Forces Command (COMMARFORCOM) is assigned to the Commander, U.S. Joint Forces Command (USJFCOM). He provides the 2nd Marine Expeditionary Force (II MEF) to USJFCOM. Likewise, the Commander, U.S. Marine Forces, Pacific (COMMARFORPAC) is assigned to the Commander, U.S. Pacific Command (USPACOM). COMMARFORPAC provides I and III MEFs to USPACOM. These assignments reflect the peacetime disposition of Marine Corps forces. Marine forces are apportioned to the remaining geographic combatant commands—the U.S. Southern Command (USSOUTHCOM), U.S. Northern Command (USNORTHCOM), U.S. European Command (USEUCOM), U.S. Central Command (USCENTCOM), and U.S. Forces Korea (USFK)—for contingency planning, and are provided to these commands when directed by the Secretary of Defense.

RESERVES

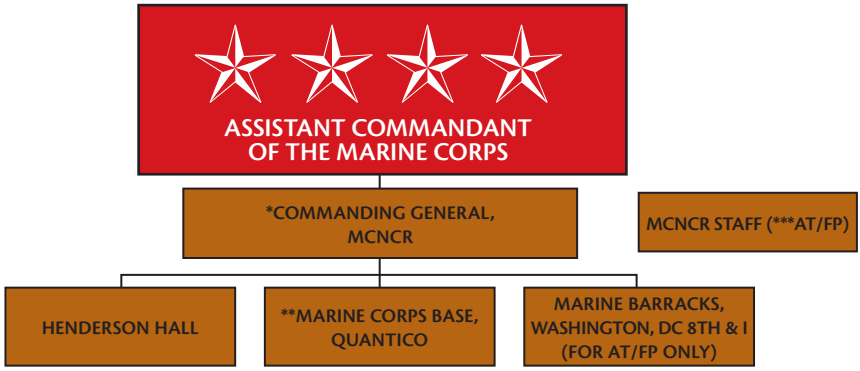
The United States Marine Corps Reserve is responsible for providing trained units and qualified individuals to be mobilized for active duty in time of war, national emergency or contingency operations, and provide personnel and operational tempo relief for active component forces in peacetime. Marine Corps force expansion is made possible by activation of the Marine Corps Reserve, which like the active forces, consists of a com-

bined-arms force with balanced ground, aviation, and logistics combat support units. Organized under the Commander, Marine Forces Reserve (COMMARFORRES), units of this command are located at 185 training centers in 47 states, Puerto Rico, and the District of Columbia. Over the past several years, the Reserve component has been closely integrated with the active component under the Marine Corps' Total Force concept. The Reserves provide individuals and specific units to augment and reinforce active capabilities. The ethos for Marine Forces Reserve is mobilization and combat readiness. This ensures the men and women of Marine Forces Reserve stand ready, willing, and able to answer the nation's call at home and abroad at a moment's notice.

Headquarters, U.S. Marine Corps

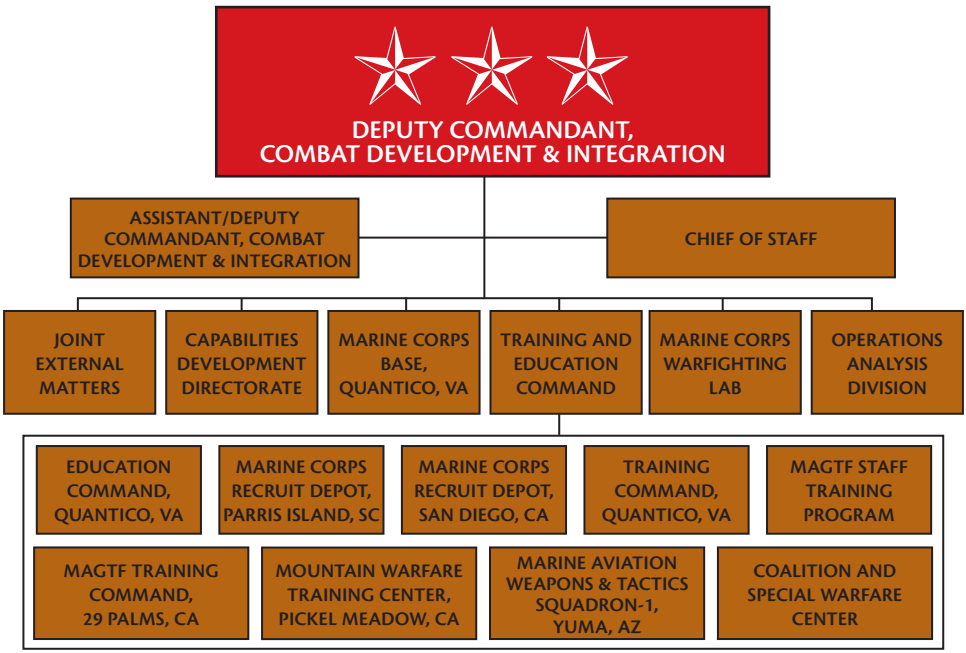


U.S. Marine Corps National Capital Region Structure

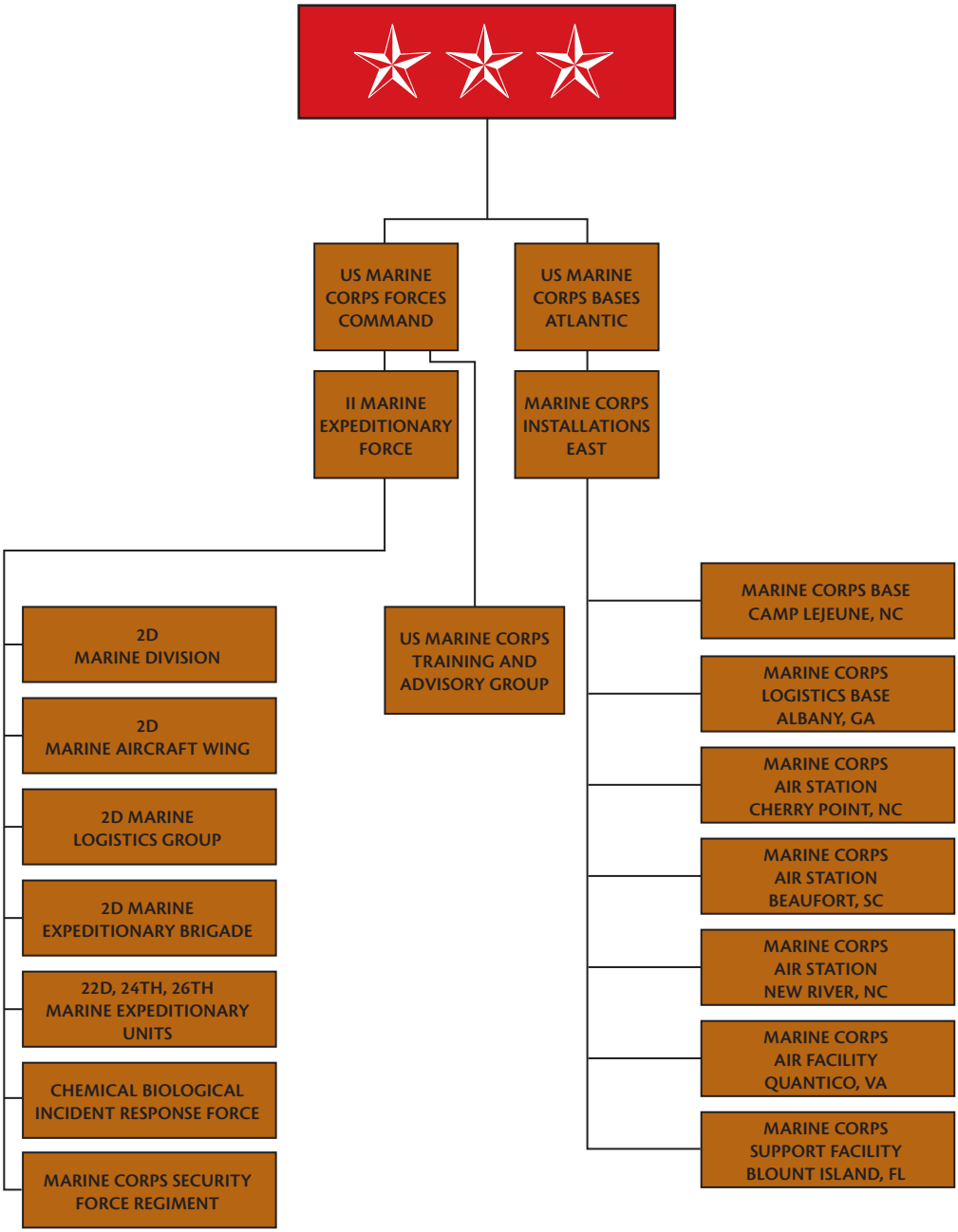


* CG, MCCDC "DUAL HATTED AS CG, MCNCRC.
** CO, MCB, QUANTICO "DUAL HATTED" AS DEPUTY COMMANDER, MCNCRC
*** ANTITERRORISM/FORCE PROTECTION - (AT/FP) STAFF FORMS THE STAFF NUCLEUS FOR THE MARINE CORPS SERVICE COMPONENT COMMAND ELEMENT OF THE JOINT FORCES HEADQUARTERS-NATIONAL CAPITAL REGION

Deputy Commandant, Combat Development & Integration/ CG Marine Corps Combat Development Command/ Commander Marine Forces Strategic Command/ CG Marine Corps Installations National Capital Region



U.S. Marine Corps Forces Command, Marine Corps Bases Atlantic



U.S. Marine Corps Forces Command Ground Units

Marine Corps Base Camp Lejeune, NC

II Marine Expeditionary Force

II Marine Expeditionary Force
- Headquarters Group

2d Marine Expeditionary Brigade

22d Marine Expeditionary Unit
- Command Element

24th Marine Expeditionary Unit
- Command Element

26th Marine Expeditionary Unit
- Command Element

2d Marine Logistics Group

Marine Logistics Group Headquarters

Combat Logistics Regiment 27
- Combat Logistics Battalion 22
- Combat Logistics Battalion 24
- Combat Logistics Battalion 26

Combat Logistics Regiment 2
- Combat Logistics Battalion 2
- Combat Logistics Battalion 6
- Combat Logistics Battalion 8

Combat Logistics Regiment 25
- 2d Maintenance Battalion
- 2d Supply Battalion
- 2d Medical Battalion
- Combat Logistics Company 21
- Combat Logistics Company 23

8th Engineer Support Battalion

2d Dental Battalion

2d Marine Division

Headquarters Battalion

2d Marine Regiment
- 1st Battalion (1/2)
- 2d Battalion (2/2)
- 3d Battalion (3/2)
- 2d Battalion, 9th Marines (2/9)

6th Marine Regiment
- 1st Battalion (1/6)
- 2d Battalion (2/6)
- 3d Battalion (3/6)
- 3d Battalion, 9th Marines (3/9)

8th Marine Regiment
- 1st Battalion (1/8)
- 2d Battalion (2/8)
- 3d Battalion (3/8)
- 1st Battalion, 9th Marines (1/9)

10th Marine Regiment
- 1st Battalion (1/10)
- 2d Battalion (2/10)
- 3d Battalion (3/10)
- 5th Battalion (5/10)

2d Tank Battalion

2d Assault Amphibian Battalion

2d Light Armored Reconnaissance Battalion

2d Combat Engineer Battalion

2d Reconnaissance Battalion

U.S. Marine Corps Forces Command Aviation Units

2d Marine Aircraft Wing

Marine Corps Air Station Cherry Point, NC

Headquarters, 2d Marine Aircraft Wing
- Marine Wing Headquarters Squadron 2

Marine Aircraft Group 14
- Marine Aviation Logistics Squadron 14
- Marine Tactical Electronic Warfare Squadron 1
- Marine Tactical Electronic Warfare Squadron 2
- Marine Tactical Electronic Warfare Squadron 3
- Marine Tactical Electronic Warfare Squadron 4
- Marine Attack Training Squadron 203
- Marine Attack Squadron 231
- Marine Attack Squadron 223
- Marine Attack Squadron 542
- Marine Aerial Refueler Transport Squadron 252
- Marine Aerial Refueler Training Squadron 253*

Marine Air Control Group 28
- Marine Tactical Air Control Squadron 28
- Marine Wing Communications Squadron 28
- Marine Air Control Squadron 2
- Marine Aircraft Support Squadron 1
- Marine Unmanned Aerial Vehicle Squadron 2
- 2d Low Altitude Air Defense Battalion

Marine Wing Support Group 27
- Marine Wing Support Squadron 274

Air Traffic Control Detachment

Bogue Airfield, NC
- Marine Wing Support Squadron 271
- Air Traffic Control detachment

Marine Corps Air Station New River, NC

Marine Aircraft Group 26
- Marine Aviation Logistics Squadron 26
- Marine Medium Helicopter Squadron 261
- Marine Medium Helicopter Squadron 264
- Marine Medium Tiltrotor Squadron 266
- Marine Heavy Helicopter Squadron 461
- Marine Light Attack Helicopter Squadron 167
- Marine Medium Tiltrotor Training Squadron 204

Marine Aircraft Group 29
- Marine Aviation Logistics Squadron 29
- Marine Medium Tiltrotor Squadron 162
- Marine Medium Tiltrotor Squadron 263
- Marine Medium Tiltrotor Squadron 365
- Marine Heavy Helicopter Squadron 464
- Marine Light Attack Helicopter Squadron 269
- Marine Helicopter Training Squadron 302

Marine Wing Support Squadron 272

Air Traffic Control Detachment

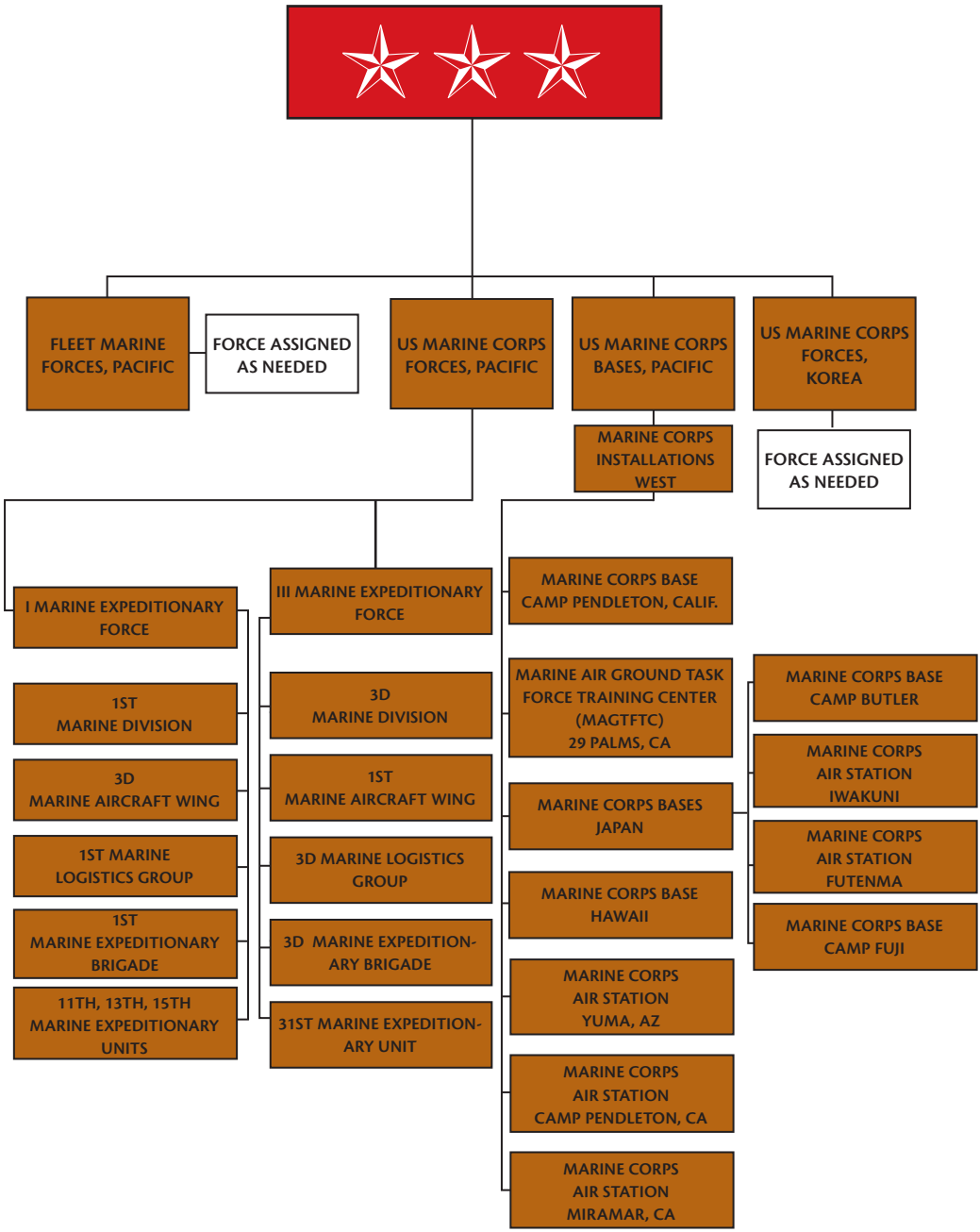
Marine Corps Air Station Beaufort, SC

Marine Aircraft Group 31
- Marine Aviation Logistics Squadron 31
- Marine Fighter Attack Squadron 115
- Marine Fighter Attack Squadron 122
- Marine Fighter Attack Squadron 251
- Marine Fighter Attack Squadron 312
- Marine All Weather Fighter Attack Squadron 224
- Marine All Weather Fighter Attack Squadron 332
- Marine All Weather Fighter Attack Squadron 533

Marine Wing Support Squadron 273

Air Traffic Control Detachment

U.S. Marine Corps Forces Pacific, Korea



U.S. Marine Corps Forces Pacific & Korea, Ground Units

Marine Corps Base Camp Pendleton, CA

I Marine Expeditionary Force

- 11th Marine Expeditionary Unit
- 13th Marine Expeditionary Unit
- 15th Marine Expeditionary Unit
- 1st Force Reconnaissance Company
- 1st Marine Expeditionary Brigade
- 9th Communications Battalion

1st Marine Logistics Group

- Marine Logistics Group Headquarters

- Combat Logistics Regiment 17
  - Combat Logistics Battalion 11
  - Combat Logistics Battalion 13
  - Combat Logistics Battalion 15

- Combat Logistics Regiment 1
  - Combat Logistics Battalion 1
  - Combat Logistics Battalion 5
  - Combat Logistics Battalion 7

- Combat Logistics Regiment 15
  - 1st Maintenance Battalion
  - 1st Supply Battalion
  - 1st Medical Battalion
  - Combat Logistics Company 11
  - Combat Logistics Company 16

- 7th Engineer Support Battalion
- 1st Dental Battalion

1st Marine Division

- 1st Marine Regiment
  - 1st Battalion (1/1)
  - 2d Battalion (2/1)
  - 3d Battalion (3/1)
  - 1st Battalion, 4th Marine Regiment (1/4)

- 5th Marine Regiment
  - 1st Battalion (1/5)
  - 2d Battalion (2/5)
  - 3d Battalion (3/5)
  - 2d Battalion, 4th Marine Regiment (2/4)

- 11th Marine Regiment
  - 1st Battalion (1/11)
  - 2d Battalion (2/11)
  - 5th Battalion (5/11)

- 3d Assault Amphibian Battalion
- 1st Light Armored Reconnaissance Battalion
- 1st Combat Engineer Battalion
- 1st Reconnaissance Battalion

U.S. Marine Corps Forces Pacific & Korea, Ground Units

Twentynine Palms, CA

I MEF assets located at the Marine Corps Air-Ground Combat Center

- 7th Marine Regiment
  - 1st Battalion (1/7)
  - 2d Battalion (2/7)
  - 3d Battalion (3/7)
  - 3d Battalion, 4th Marine Regiment (3/4)
- 11th Marine Regiment
  - 3d Battalion (3/11)
- 1st Tank Battalion
- 3d Assault Amphibian Battalion
  - D Company
- Combat Logistics Battalion 7
- 3d Light Armored Reconnaissance Battalion

Marine Corps Base Kaneohe Bay, HI

III MEF assets located at

- Marine Corps Base Kaneohe Bay
- 3d Marine Regiment
  - 1st Battalion (1/3)
  - 2d Battalion (2/3)
  - 3d Battalion (3/3)
- 1st Battalion, 12th Marine Regiment (1/12)
- Combat Service Support Group 3
- Combat Logistics Battalion 3

U.S. Marine Corps Forces Pacific & Korea, Ground Units

Okinawa, Japan

III Marine Expeditionary Force

III Marine Expeditionary Force
- Headquarters Group
- 7th Communication Battalion
- 3d Intelligence Battalion
- Special Operations Training Group
- Headquarters & Service Company

3d Marine Expeditionary Brigade
- 31st Marine Expeditionary Unit

3d Marine Logistics Group

Marine Logistics Group Headquarters

Combat Logistics Regiment 37
- Combat Logistics Battalion 31

Combat Logistics Regiment 3
- Combat Logistics Battalion 3 (Hawaii)
- Combat Logistics Battalion 4

Combat Logistics Regiment 35
- 3rd Maintenance Battalion
- 3rd Supply Battalion
- 3rd Medical Battalion
- Combat Logistics Company 36

9th Engineer Support Battalion
- 3rd Dental Battalion

3d Marine Division

4th Marine Regiment
- 4 Unit Deployment Program Battalions

12th Marine Regiment
- Combat Assault Battalion
- 3d Force Reconnaissance Battalion
- Echo Battery, 2d Battalion, 12th Marines (2/12)
- 3d Battalion, 12th Marines (3/12)

U.S. Marine Corps Forces Pacific & Korea, Aviation Units

1st Marine Aircraft Wing

Marine Corps Air Station Futenma, Okinawa, Japan

Marine Aircraft Group 36
- Marine Aviation Logistics Squadron 36
- Marine Medium Helicopter Squadron 262
- Marine Medium Helicopter Squadron 265
- Marine Heavy Helicopter Squadron – Pacific (Unit Deployment Program)
- Marine Light Attack Helicopter Squadron – Pacific (Unit Deployment Program)
- Marine Aerial Refueler Transport Squadron 152

Marine Air Control Group 18
- Marine Tactical Air Command Squadron 18
- Marine Wing Communications Squadron 18
- Marine Air Control Squadron 4
- Marine Air Support Squadron 2

Marine Wing Support Squadron 172

Marine Corps Base Camp Butler, Okinawa, Japan

1st Marine Aircraft Wing
- Marine Wing Headquarters Squadron 1
- Marine Wing Support Group 17

Marine Corps Air Station Iwakuni, Japan

Marine Wing Support Squadron 171

Marine Aircraft Group 12
- Marine Aviation Logistics Squadron 12
- Marine Fighter Attack Squadron – Atlantic (Unit Deployment Program)
- Marine Fighter Attack Squadron 212
- Marine Fighter Attack Squadron – Pacific (Unit Deployment Program)
- Marine Tactical Electronic Warfare Squadron – Atlantic (Unit Deployment Program)

Marine Corps Base Kaneohe Bay, HI

Marine Aircraft Group 24
- Marine Heavy Helicopter Squadron 362
- Marine Heavy Helicopter Squadron 363
- Marine Heavy Helicopter Squadron 463
- Marine Aviation Logistics Squadron 24

U.S. Marine Corps Forces Pacific & Korea, Aviation Units

3d Marine Aircraft Wing

Marine Corps Air Station Miramar, CA

Headquarters, 3d Marine Aircraft Wing
- Marine Wing Headquarters Squadron 3

Marine Aircraft Group 11
- Marine Aviation Logistics Squadron 11
- Marine Fighter Attack Squadron 232
- Marine Fighter Attack Squadron 314
- Marine Fighter Attack Squadron 323
- Marine Fighter Attack Squadron All Weather 121
- Marine Fighter Attack Squadron All Weather 225
- Marine Fighter Attack Squadron All Weather 242
- Marine Fighter Attack Training Squadron 101
- Marine Aerial Refueler Transport Squadron 352

Marine Aircraft Group 16
- Marine Aviation Logistics Squadron 16
- Marine Medium Helicopter Squadron 161
- Marine Medium Helicopter Squadron 163
- Marine Medium Helicopter Squadron 165
- Marine Medium Helicopter Squadron 166
- Marine Heavy Helicopter Squadron 361
- Marine Heavy Helicopter Squadron 462
- Marine Heavy Helicopter Squadron 465
- Marine Heavy Helicopter Squadron 466

Marine Wing Support Group 37
- Marine Wing Support Squadron 373

Marine Air Control Group 38
- Marine Wing Communications Squadron 38
- Marine Tactical Air Control Squadron 38

Marine Corps Air Station Yuma, AZ

Marine Aircraft Group 13
- Marine Aviation Logistics Squadron 13
- Marine Attack Squadron 211
- Marine Attack Squadron 214
- Marine Attack Squadron 311
- Marine Attack Squadron 513

Marine Wing Support Squadron 371
Marine Air Control Squadron 1
Marine Aviation Weapons and Tactics Squadron 1
Marine Fighter Attack Training Squadron 401

Marine Corps Air Station Camp Pendleton, CA

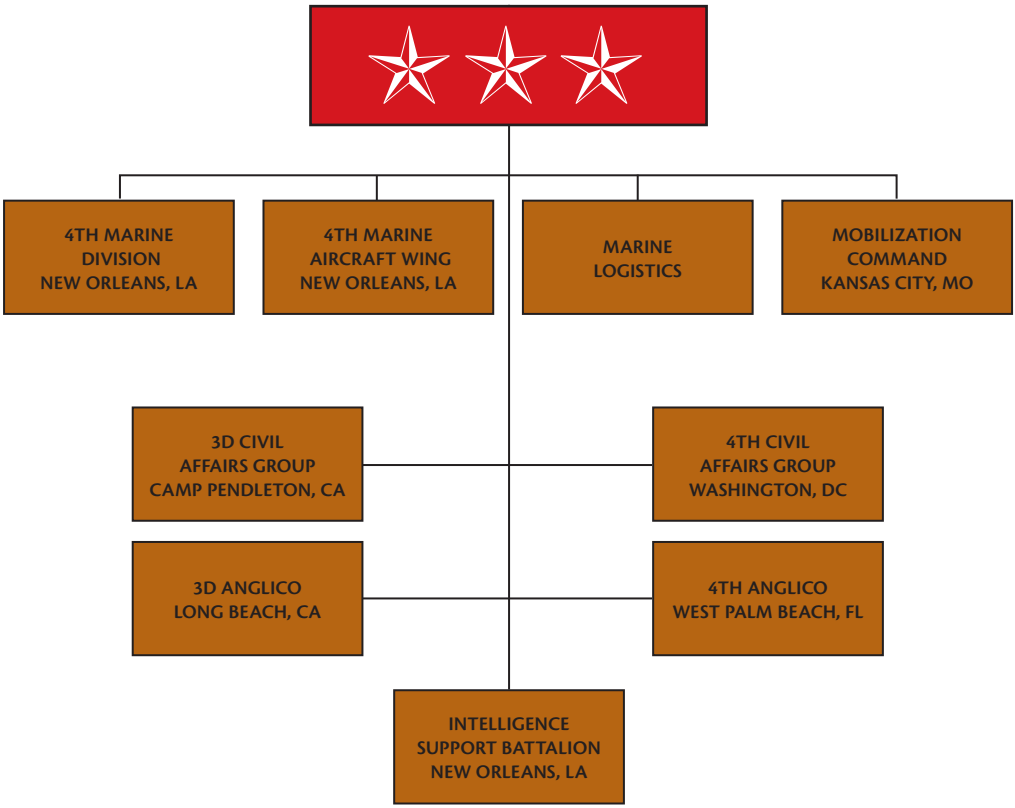
Marine Aircraft Group 39
- Marine Aviation Logistics Squadron 39
- Marine Light Attack Helicopter Squadron 169
- Marine Light Attack Helicopter Squadron 267
- Marine Light Attack Helicopter Squadron 367
- Marine Light Attack Helicopter Squadron 369
- Marine Helicopter Training Squadron 164
- Marine Medium Helicopter Squadron 268
- Marine Medium Helicopter Squadron 364
- Marine Helicopter Training Squadron 303

Marine Wing Support Squadron 372
Marine Air Support Squadron 3
3d Low Altitude Air Defense Battalion

Twentynine Palms, CA

(I MEF Assets located at the Marine Corps Air-Ground Combat Center)
Marine Unmanned Aerial Vehicle Squadron 3
Unmanned Aerial Vehicle Squadron 1
Marine Wing Support Squadron 374

U.S. Marine Forces Reserve



U.S. Marine Corps Forces Reserve Ground Units

4th Marine Division

New Orleans, LA
- Headquarters, Headquarters Battalion

Tampa, FL
- Headquarters, 4th Assault Amphibian Battalion

Fort Worth, TX
- Headquarters, 14th Marines

San Bruno, CA
- Headquarters, 23d Marines

Kansas City, MO
- Headquarters, 24th Marines

Worcester, MA
- Headquarters, 25th Marines

San Diego, CA
- Headquarters, 4th Tank Battalion

Bessemer, AL
- Headquarters, Anti- Terrorism Battalion

Mobile, AL
- Headquarters, 3d Force Reconnaissance Company

San Antonio, TX
- Headquarters, 4th Reconnaissance Battalion

Kaneohe Bay, HI
- Headquarters, 4th Force Reconnaissance Company

Camp Pendleton, CA
- Headquarters, 4th Light Armored Reconnaissance Battalion

Baltimore, MD
- Headquarters, 4th Combat Engineer Battalion

Broken Arrow, OK
- TOW Training Company

4th Marine Logistics Group

New Orleans, LA
- Headquarters, 4th FSSG

Marietta, GA
- Headquarters, Headquarters and Service Battalion

Portland, OR
- Headquarters, 6th Engineer Support Battalion

Red Bank, NJ
- Headquarters, 6th Motor Transport Battalion

Newport News, VA
- Headquarters, 4th Supply Battalion

Charlotte, NC
- Headquarters, 4th Maintenance Battalion

Ft. Lewis, WA
- Headquarters, 4th Landing Support Battalion

Brooklyn, NY
- Headquarters, 6th Communications Battalion

San Diego, CA
- Headquarters, 4th Medical Battalion

Marietta, GA
- Headquarters, 4th Dental Battalion

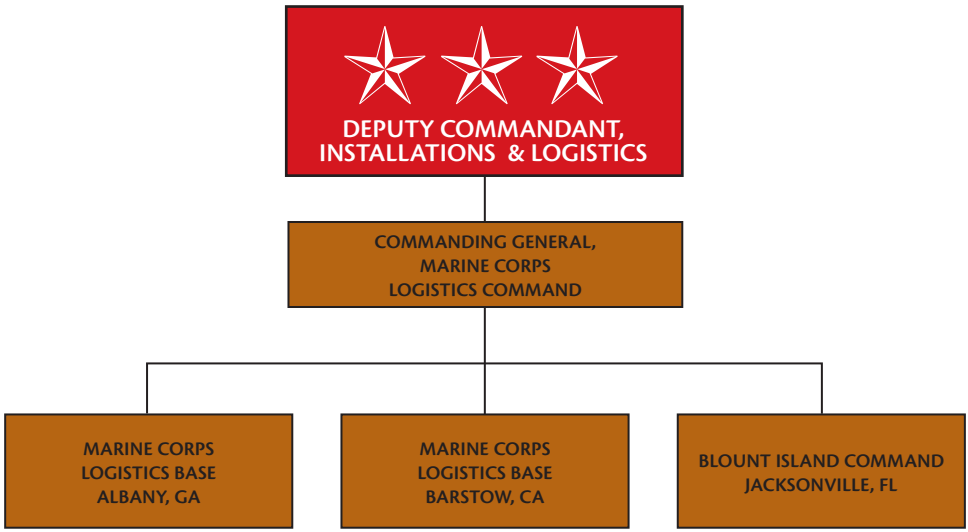
Camp Pendleton, CA
- 4th MLG Forward-West

Camp Lejeune, NC
- 4th MLG Forward-East

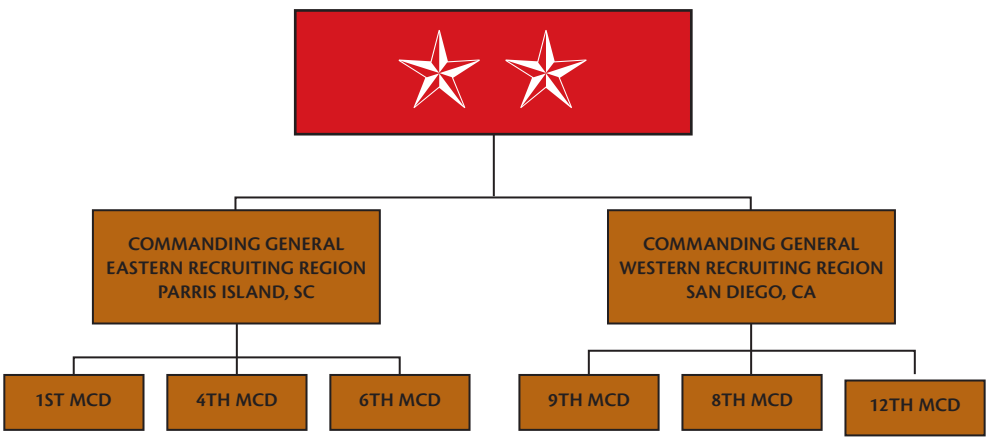
U.S. Marine Corps Forces Reserve Aviation Units

4th Marine Aircraft Wing	
Marine Aircraft Group 41	Ft. Worth, TX
Marine Fighter Arrack Squadron 112	Ft. Worth, TX
Marine Aerial Refueler Transport Squadron 234	Ft. Worth, TX
Marine Aviation Logistics Squadron 41	Ft. Worth, TX
Marine Aircraft Group 42 Headquarters	NAS Atlanta, GA
Marine Fighter Attack Squadron 142	NAS Atlanta, GA
Marine Medium Helicopter Squadron 774	NAS Norfolk, VA
Marine Light Attack Helicopter Squadron 773 (-)	NAS Atlanta, GA
Detachment, A	NAS/JRB Belle Chasse, LA
Detachment, B	NAS Norfolk, VA
Detachment, C	NAS/JRB New Orleans, LA
Marine Aviation Logistics Squadron 42	NAS Atlanta, GA
Marine Aviation Logistics Squadron Detatchment A	MCAS Miramar, CA
Marine Aviation Logistics Squadron Detatchment B	NAS Norfolk, VA
Marine Aviation Logistics Squadron Detatchment C	NAS/JRB New Orleans, LA
Marine Aircraft Group 46 Headquarters	MCAS Miramar, CA
Marine Fighter Attack Squadron 134	MCAS Miramar, CA
Marine Heavy Helicopter Squadron 769	Edwards AFB, CA
Marine Medium Helicopter Squadron 764	Edwards AFB, CA
Marine Light Attack Helicopter Squadron 775 (-)	MCB Camp Pendleton, CA
Detachment, A	MCAS Camp Pendleton, CA
Detachment, B	Edwards AFB, CA
Marine Fighter Training Squadron 401	MCAS Yuma, AZ
Marine Wing Support Group 47 Headquarters	Mt. Clemens, MI
Marine Wing Support Squadron 471	Minneapolis, MN
Marine Wing Support Squadron 472	NAS Willow Grove, PA
Marine Wing Support Squadron 473	MCAS Miramar, CA
Marine Air Control Group 48 Headquarters	Great Lakes, IL
Marine Wing Communication Squadron 48	Great Lakes, IL (Detachment A)
Marine Tactical Air Command Squadron 48	Great Lakes, IL
Marine Air Support Squadron 6 (-)	Westover AFB, MA
Marine Air Control Squadron 23 (-)	Aurora, CO
Marine Air Control Squadron 24	Dam Neck, VA
4th Low Altitude Air Defense Battalion	Pasadena, CA
Marine Aircraft Group 49 Headquarters	NAS/JRB Willow Grove, PA
Marine Fighter Attack Squadron 321	Andrews AFB
Marine Aerial Refueler Transport Squadron 452	Stewart ANGB, NY
Marine Heavy Helicopter Squadron 772	NAS/JRB Willow Grove, PA
Marine Aviation Logistics Squadron 49	Stewart ANGB, NY
Detachment, HMLA-775	Johnstown, PA (ADCON to MAG-49)

U.S. Marine Corps Installations & Logistics



U.S. Marine Corps Recruiting Command



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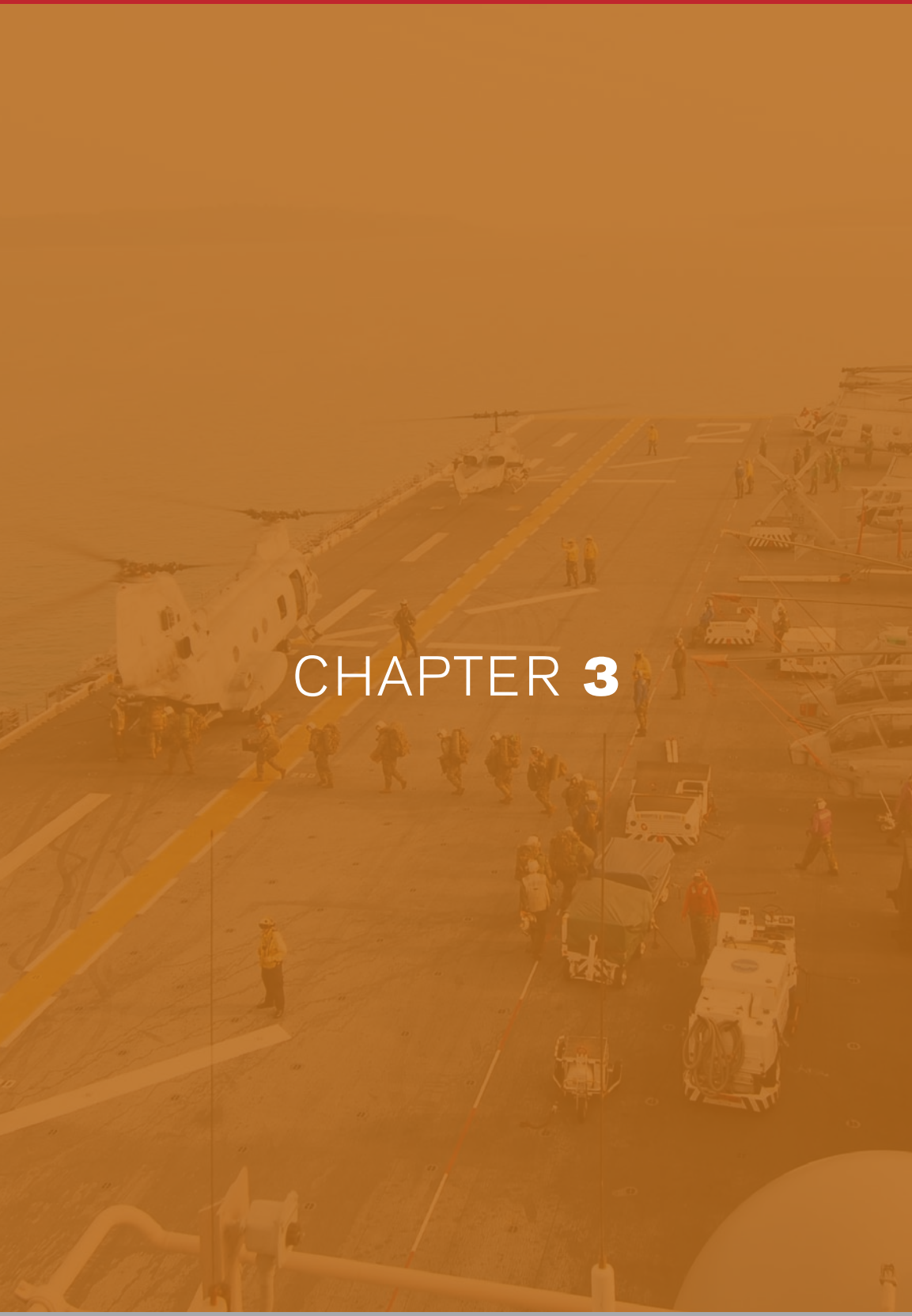


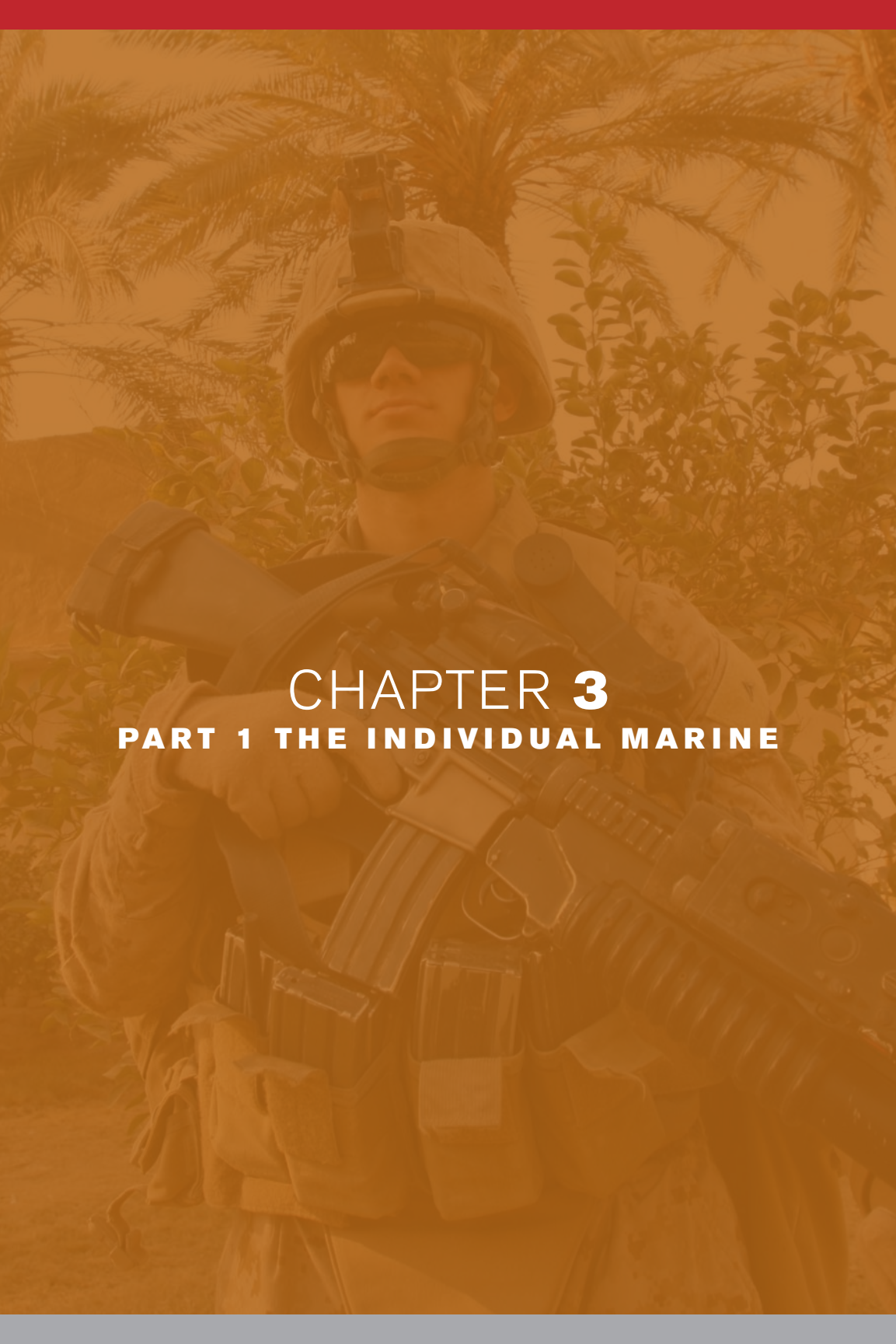
CHAPTER **3**

PROGRAMS

INTRODUCTION

America's Marines are fully engaged in what we believe is a generational struggle against fanatical extremists, and the challenges we face are of global scale and scope. Marines are a tough breed and will do all it takes to win. Congress has mandated that they "be the most ready when the Nation is least ready," and we are committed to ensuring that the technologies, systems and weapons are in their hands to do what is needed, across the entire spectrum of the United States' engagement world wide.

Focusing on our number-one priority, the Individual Marine, we are committed to providing the best equipment, education and training, always mindful of the need to be good stewards of the Nation's scarce resources. Chapter 3 of ***Concepts & Programs 2008*** outlines the programs and initiatives that we are pursuing to ensure that America's Marine Corps remains the world's foremost expeditionary fighting force and that the Individual Marine has the "right stuff" to carry out all missions and tasks.



CHAPTER 3

PART 1 THE INDIVIDUAL MARINE

INTRODUCTION

The Marine Corps and the Nation are blessed with young patriots who every day live up to the proud traditions and great legacy of the Marine Corps. Their successes in battle—from the mountains of Afghanistan to the desert heat of western Iraq—and their responses to other crises and contingencies worldwide have written new chapters in the long history of our Corps. These adaptable and determined young men and women are professionals in every sense of the word, whether they are in battle overseas or conducting disaster-relief operations at home.

We must ensure our Individual Marines are equipped with the latest and most effective weapons and equipment our Nation's industrial base has to offer. Indeed, it is our duty to provide the tools needed to carry out the full spectrum of missions and tasks around the world. But, we will equip the man, not man the equipment, as we know that at the core of all operations is a human being, the Individual Marine, who carries out specific tasks to meet critical mission objectives.

To that end, Figure 3-1 depicts some of the more common and recognizable items of combat clothing and equipment that we've recently fielded or are preparing to field. Recognizing the importance of the M249 Squad Automatic Rifle (SAW), we've added more durable bipods (1) and a more versatile buttstock (2). The improved bipods are made of steel and the improved buttstock enables employment of the weapon in multiple environments by shooters of varying size, without degrading current capabilities. Along those same lines, we've developed a new vehicle mount (3) that allows the gunner to rapidly and accurately engage targets. The new mount supports both M249 SAW as well the M240B and works with multiple types of vehicles.

For the Marine's standard weapon system, the M16A4, we've improved a number of it's optional features to include the following. A Grip Pod (4) that provides the infantry Marine a vertical hand-grip that has folding, extendable, and removable bipods. The Grip Pod is shown with both the bipods open and closed. The Rifle Combat Optic (5) is a fixed 4X optical aiming sight. It provides the Marine with a targeting tool to engage distant daylight and near low-lit targets with increased identification certainty. Additionally, the new, Improved Multi-Purpose Bayonet (6) will provide greater durability than the M-7 bayonet and has a scabbard so as to function as a fighting knife as well as a bayonet. It's high carbon steel blade will have a serrated edge and handle will be made from hard rubber to offer better control in various weather conditions.

The M224X 60 mili-meter (60mm) lightweight Company Mortar System (7) will replace the currently fielded M224 60mm mortar system. The M224X provides the same capability as the M224, however it is lighter, easier to manufacture and maintain, and will reduce overall life-cycle costs by 40-50%. Looking to ease the rigors of combat, the Improved Load Bearing System (8) will result in less fatigue, fewer equipment failures, and more combat effectiveness. Additionally, communication will be improved through use

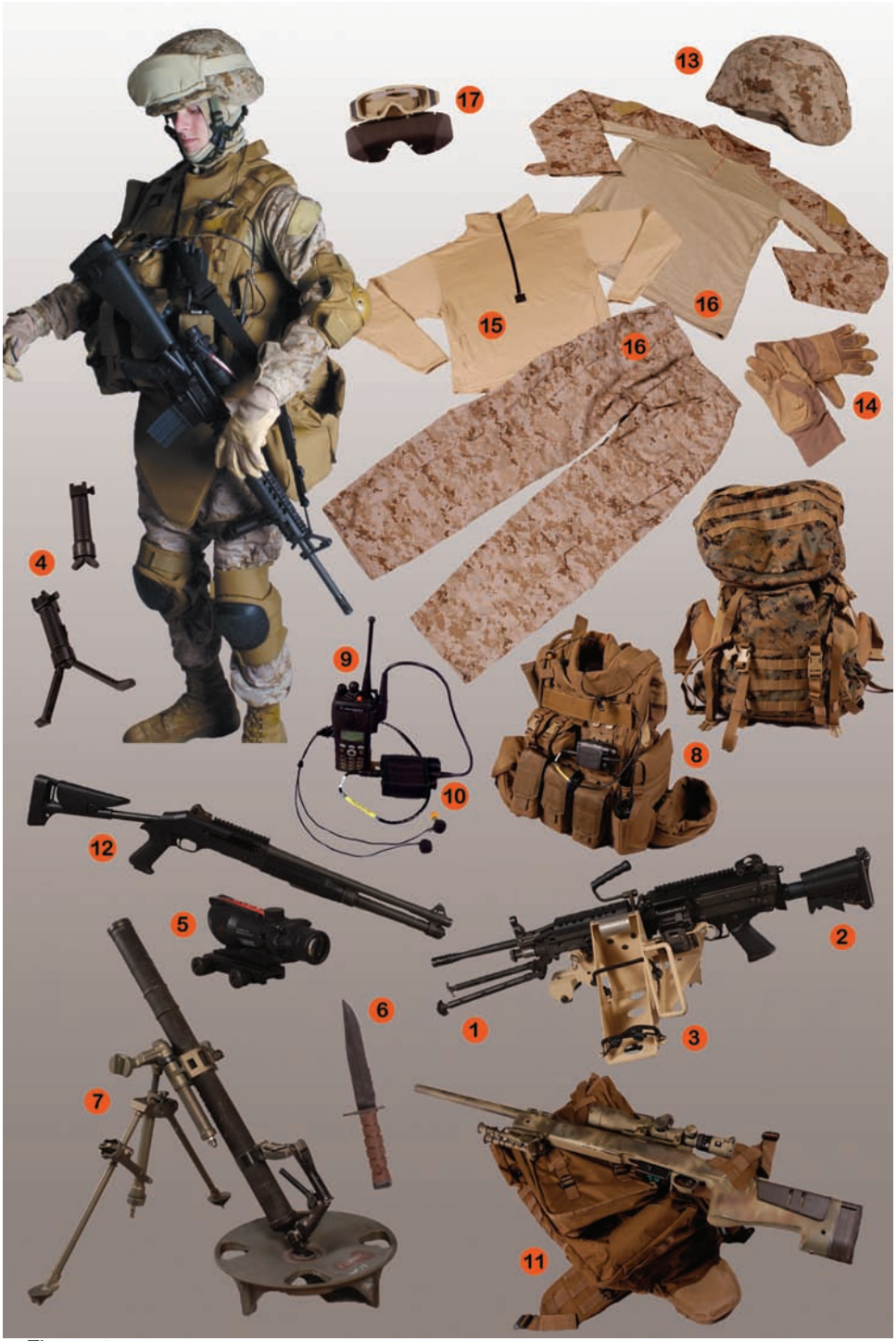


Figure 3-1

of the Integrated Intra Squad Radio (IISR) (9) which is lighter than legacy radios and cheaper to use. Shown along side the IISR is the QuietPro Enhanced Hearing Protection system (10) which is an in-ear communication headset that not only has active and passive hearing protection but also provides enhanced hearing capability.

For the Scout-Sniper we've introduced the Gunslinger Backpack (11). This is a 2,900 cubic inch robust assault backpack with an integrated weapons carriage pocket designed to conceal/protect a sniper's rifle during insertion and extraction. Employed primarily by Marines in Military Police units, the M1014 Joint Service Combat Shotgun (12) provides an ambidextrous, semi-automatic 12 gauge weapon for use in offensive and defensive operations. It is capable of accepting either 2 3/4 " or 3" shells and also has a telescoping tubular buttstock that allows the user to configure the shotgun for desired length.

All Marines will benefit from the Lightweight Helmet (LWH) (13). The LWH has improved ballistic protection capability over its forerunner, is a half pound lighter and also has features that improve the fit. It's also provided with a pad suspension system for added protection from blunt force trauma, and a four-point retention system that provides the Marine with greater stability while reducing fatigue. Flame Resistant Organization Gear (FROG) provides limited protection from exposure to flame/fire/ resulting from blasts associated with improvised explosive devices. Some of the items in the FROG clothing system are gloves (14), undergarments (15) and a combat shirt and trouser ensemble (16). The fabrics used in all items are self extinguishing and do not melt or drip. Finally, we are providing Marines with the Eye Safety System (17) kit which comes with two single piece ballistic lenses, one clear and one smoke gray. The lenses are

made with anti-scratch and anti-fog coatings and foam seal between the face and the goggle frame allows ventilation while keeping dust out.

We must ensure our Individual Marines are equipped with the latest and most effective weapons and equipment our Nation's industrial base has to offer. Indeed, it is our duty to provide the tools needed to carry out the full spectrum of missions and tasks around the world. But, we will equip the man, not man the equipment, as we know that at the core of all operations is a human being, the Individual Marine, who carries out specific tasks to meet critical mission objectives. In the Chapter 3 pages that follow we discuss programs that are designed to make the Individual Marine a more effective and efficient weapon. Concurrently, they highlight our commitment to ensuring the safety and survivability of this most important and valuable asset. We also know that our Marine families are vital to our ability to meet the Nation's expectations. They offer marvelous support, abiding resolve and steadfast patience. Programs that we have or will put in place are focused on "taking care of our own."

MARINE EXPEDITIONARY RIFLE SQUAD (MERS)

The Marine Expeditionary Rifle Squad (MERS) is a program designed to apply a system's engineering approach to equipping a Marine rifle squad, our most fundamental warfighting unit. The focus of the program is to view the Marine rifle squad in a holistic manner—one in which Individual Marines comprise a whole much more effective than the sum of its separate elements. The integration and configuration management of all components that are worn, carried and consumed by the squad will increase lethality, flexibility, and survivability of infantry forces. The program has founded the Squad Integration Facility *GRUNTWORKS*. The facility provides a venue to test the capabilities and limitations of all equipment in development and under consideration for procurement that will be delivered to the infantry squad. For the first time human factors analysis will be applied to the physical integration of the infantry squad's equipment. The physiological, ergonomic, and performance impacts of fielding a new piece of equipment create a constant set of trade-offs between weight management, lethality, survivability, mobility, and sustainment. MERS will highlight these trade offs and refine solutions that incorporate the capabilities of the Marine rifle squad as an integrated system.

MERS has also been designated as the Marine Corps Systems Command's Distributed Operations Coordinator. In this role MERS has managed the fielding of designated Distributed Operations items to battalions identified in the Infantry Battalion Enhancement Period (IBEP).

MERS integrates the previously piecemealed acquisitions of equipment for the Marine rifle squad. The August 2007 Marine Corps Science and Technology Strategic Plan emphasized the lightening of the load for the individual Marine and Sailor. MERS provides a conduit through which to conduct the integration of planned and ongoing programs. One benefit of this program is the evaluation of weight impacts on the performance of an infantry squad. These studies will extend to the ergonomics benefits of certain design requirements. The program will also be able to coordinate systems to eliminate redundant weight and volume. MERS bridges the "stovepipes" created by acquiring material solutions to identified shortfalls without looking at the infantry squad as a system. MERS is working with multiple programs at the Technology Development Phase and the System Integration Phase of acquisition.

The fielding of Distributed Operations equipment to battalions participating in IBEP provides those battalions with a significantly increased command and control (C2) capability. The robust C2 package combined with appropriate training will empower the non-commissioned officers (NCO) at the fire team and squad level. The communication equipment will increase the battalion's capabilities across all six warfighting functions. Additionally, the potential for exponential gains in intelligence report-

ing has been created through the fielding of enhanced digital imagery capabilities. The equipping of the IBEP battalions enables greater dominance on the battlefield through information superiority.

The *GRUNTWORKS* squad integration facility opened on 1 November 2007. MERS plans to complete a weight analysis during fiscal year 2008. Additionally, MERS will begin testing on an integrated head-borne system, load carriage design, and establish the capability to evaluate an equipped squad in the various Marine Corps mobility platforms.

The fielding of Distributed Operations Equipment under the IBEP policy has been initiated with 1st Battalion, 5th Marines now deployed, 1st Battalion, 9th Marines, 3rd Battalion, 4th Marines, and 2nd Battalion, 7th Marines. Fielding will continue with other battalions designated by the Marine Expeditionary Force commands. This program has moved immediately to the Production and Deployment Phase. Fielding is complete to the Schools of Infantry (SOI), West and East. The SOIs were given a high priority to establish a capabilities baseline for the NCO leadership rotating back to the Operating Forces. Additionally, equipment and training is currently being provided to the Infantry Officer Course (IOC). Fielding of equipment will continue through fiscal year 2008 as directed by the Deputy Commandant for Plan, Policies, & Operations of Headquarters, Marine Corps, and the Commanding General of Marine Corps Combat Development Command.

MARINE ENHANCEMENT PROGRAM (MEP)

The Marine Enhancement Program (MEP) was created in response to guidance provided by Congress in 1989 for the Marine Corps to establish programs dedicated to improving the "lethality, comfort and survivability" of the individual Marine. The primary intent of the program is to focus attention on low-cost, low visibility materiel solutions that can be rapidly fielded and that typically do not compete well against larger, high profile items in the budget. The MEP is dedicated to ensuring improvements for the individual Infantryman are identified and quickly transitioned into practical solutions. This goal is achieved through an accelerated acquisition process that utilizes commercially available technologies to quickly provide lighter, more improved "infantry items" to the Marines.

Items procured and fielded under the MEP seek to reduce the load, increase the survivability, enhance the safety and improve the lethality of the individual Marine Infantryman across the spectrum of operational environments. The systems developed, procured and fielded by the MEP are primarily intended for the Marine Infantryman within the Ground Combat Element (GCE). When applicable, MEP items have been transitioned to support other Military Occupational Specialties within the GCE (e.g. Combat Engineers, Artilleryman, etc.) and across the Marine Air Ground Task Force (e.g. Supply, Maintenance, Administration, Ordnance, etc.). The following are a few items that MEP has funded in recent years: Combat Shotgun, Field Tarp, Flame Resistant Organizational Gear, Modular Tactical Vest, Military Eye Protection, Multi-Purpose Bayonet, Rifle Combat Optic and Sniper Weapon Concealment System.

The MEP Working Group, which consists of core representatives from Plans, Policies and Operations, Marine Corps Combat Development Command and Marine Corps Systems Command, meets quarterly to review proposals submitted by Marines. In fiscal year 2008, MEP is funding the following prioritized initiatives: Battery Alternatives and Charging Adapters, Individual Water Purification Block II, Fire Suppression System, Solar DACP, Sling Keeper for the M203, Grip Pod for the M203 and M249 SAW, Safety Blank Fire Adapter, Muzzle Covers, Personal Cooling Vest, 3 Season Sleeping Bag and Personal Illumination System.

MARINE CORPS MARTIAL ARTS PROGRAM (MCMAP)

Since its inception in 1775, the Marine Corps continues to distinguish itself as a martial culture second to none. The legacy of the Corps is built upon the close combat of ships of sail, the storming of the bois de Belleau, the holding of "Bloody Ridge" on Guadalcanal, and in recent times, the Iraq and Afghanistan Campaigns. In order to better prepare Marines for the conflicts to come, the 32nd Commandant of the Marine Corps, General James L. Jones, envisioned a program that would provide Marines the tools with which to conduct Military Operations in Urban Terrain and to realize the potential of every Marine as a warrior. That vision has been reenergized by the 34th Commandant of the Marine Corps, General James Conway, with the release of his guidance in ALMAR 034/07. The Marine Corps Martial Arts Program (MCMAP), managed by the Martial Arts Center of Excellence (MACE), continues to be the successful product of that vision.

The Martial Arts Program is based on five, colored-belt levels with six different degrees of black belt. Each belt level is broken down into three disciplines, each of which a Marine must become proficient in before attaining the next belt level. The mental, character, and physical disciplines of the warrior are the foundation of the Martial Arts Program. The mental discipline consists of warrior studies, martial culture studies, combative behavior studies, and other professional military education. The character discipline is built around the Marine Corps' core values: Honor, Courage, and Commitment, Leadership Traits and Principles,

and troop information. The character discipline stresses the role of the "ethical" warrior on and off the battlefield 24 hours a day, seven days a week. The physical discipline consists of the physical techniques taught throughout the five belt levels. The physical discipline also encompasses the Combat Conditioning Program and the future Combat Fitness Test. Through the successful synergy of these disciplines at each belt level, a Marine will enhance their own warrior spirit and tactical cunning for all the challenges the Marine may face well into the 21st Century.

The following are the belt levels from beginner to expert, with a description of some of the lessons, and prerequisites for each belt:

• **Tan Belt** - Basic techniques and an introduction to the martial culture. There are no prerequisites for this belt. It is designed for the entry-level, basically trained Marine. All Marines attending boot camp at Parris Island and San Diego graduate as Tan belt Marines. All officers graduating at The Basic School graduate, at a minimum, as Tan belt Marines. There are 27.5 hours and 0 sustainment hours for this belt.

• **Gray Belt** - Expansion on basic techniques, introduction to ground fighting

and force continuum. The prerequisites for this belt are a recommendation from the commanding officer, complete Tan belt sustainment and integration training, and complete MCI 03.3 Fundamentals of Marine Corps Leadership. There are 32 training hours and seven sustainment hours for this belt.

• **Green Belt** - Expansion on Gray belt techniques, weapons integration / team integration training, and free sparring. The prerequisites for this belt are a recommendation from the commanding officer, complete Gray belt sustainment and integration training, Lance Corporal or above, and appropriate level PME complete. There are 30 training hours and 14 sustainment hours for this belt.

• **Green Belt Instructor** - This is the first belt level that is designated as Martial Art Instructor in accordance with the MCMAP program of instruction. An MOS is assigned to this level – 0916. The prerequisites for this belt are a recommendation from the commanding officer, complete Gray belt sustainment and integration training, Corporal or above, appropriate level PME complete, Physical Fitness Test score of First Class, and a current swim qualification (thousands of instructors have been trained throughout the Marine Corps).

• **Brown Belt** - Expansion on Green belt techniques, weapons integration/ team integration training, free sparring, and basic firearm retention and disarmament techniques. The prerequisites for this belt are a recommendation from the commanding officer, complete Green belt sustainment and integration training, Corporal or above, and appropriate level PME complete. There are 35.5 training hours and 21 sustainment hours for this belt.

• **Black Belt. 1st Degree** - Expert techniques, counters to pistol presentations, advanced anatomy and physiology. The prerequisites for this belt are a recommendation from the commanding officer, complete Green and or Brown belt sustainment and integration training, Sergeant or above, appropriate level PME complete, MAI qualified, and current swim qualification. An MOS is assigned to this level – 0917. All career Marines should earn their Black belt within 15 - 20 years from obtaining their initial Tan

belt. There are 34.5 training hours and 28 sustainment hours for this belt (over 1,000 Marines have been trained to the Instructor Trainers level).

• **Black Belt. 2nd to 6th Degree** - Marines designated as Instructors or Instructor Trainers, Military Occupational Specialty 0916 and 0917, respectively, are authorized to advance to these belt levels. The emphasis in these degrees is placed on giving back to the program, unit training, professional studies on martial cultures, and advanced skills within the martial arts program. The MACE is the only organization in the Corps that has the authority to promote to these levels.

The MCMAP techniques, complemented with subsequent training and sustainment to more advanced levels, provide every Marine with the ability and confidence to fight in hand-to-hand combat using any weapon available. The techniques also provide every Marine the self-discipline to understand the responsible use of force, both on and off the battlefield. The effective use of these two disciplines ensures the Marine Corps will win our nation's battles by being the most ready when the Nation is least ready, and secure the peace in the same battle. With the knowledge of the spectrum of violence (force continuum) taught during Gray belt training, and the combination of non-lethal techniques taught in Tan belt, Marines are equipped with the ability to effectively engage in Military Operations other than War (MOOTW).

ALMAR 034/07 was released in July of 2007. The purpose of the ALMAR was to promulgate the CMC's guidance and support for MCMAP. MCMAP continues to be integral to the development and sustainment of our Warrior Ethos. It is a key asset in developing both warfighting skills and character that all commanders should be utilizing to its fullest potential. The ALMAR goes on further to provide specific procedures and requirements for execution of MCMAP throughout the Corps. All Marines, both active and reserves, will be trained to Tan belt by the end of calendar year 2007. All infantrymen will be trained to Green belt by the end of CY 2008. All other Combat Arms Marines will be trained to Gray belt by the end of CY 2008.

The MACE is located aboard Camp Barrett at Raider Hall in Quantico, VA, on the west side of Interstate 95. From Raider Hall, the MACE conducts four Martial Arts Instructor Trainer (MAIT) courses and six to eight Martial Art Instructor (MAI) courses per year. The MACE also conducts a number of MAI mobile training teams around the Corps every year. Upon completion of the physically demanding, seven-week Martial Arts Instructor Trainer course, a Marine earns status as a First Degree Black belt Instructor Trainer, and a Combat Conditioning Specialist. Upon completion of the challenging three-week Martial Arts Instructor course, a Marine earns status as a Green belt Instructor.

The end state of the Marine Corps Martial Arts Program is to develop a professional Marine who is an arms carrying professional who cannot only fight under

a multitude of circumstances, but understands the moral dimensions of conflict, make ethical decisions in any situation, and upholds the image and high moral fiber upon which the Marine Corps has prided itself for more than 232 years. As Marines accept the training and live up to the intent of the program, the potential exists to generate and foster a Corps of martial and ethical warriors bound to the safety and welfare of their Marines. MCMAP is the vehicle the Corps will employ to propel the transformation from civilian to Marine and promises to develop the characteristics and traits we seek in all our leaders.

INFANTRY AUTOMATIC RIFLE (IAR)

DESCRIPTION

The Infantry Automatic Rifle (IAR) program seeks to replace the current M249 Squad Automatic Weapon in all infantry, reconnaissance and Light Armored Reconnaissance squads. The IAR will be a non-developmental, 5.56mm automatic rifle that is lighter, more durable, and more reliable than the M249 SAW.

OPERATIONAL IMPACT

Use of the automatic rifle will significantly enhance the automatic rifleman's maneuverability and displacement speed, while providing the ability to suppress or destroy targets of most immediate concern to the fire team.

PROGRAM STATUS

The IAR program entered the system development and demonstration phase during 1st Qtr, fiscal year 2008 following a successful Milestone B decision. A Milestone C decision is expected during 3rd Qtr, fiscal year 2008 following which the program will enter into the production and deployment phase. Initial operational capability is scheduled to be achieved during 3rd Qtr, fiscal year 2009 and full operational capability is scheduled to be achieved during 3rd Qtr, fiscal year 2010.

Procurement Profile:	FY2008	FY2009
Quantity	20	4500

Developer/Manufacturer:
TBD

MODULAR WEAPON SYSTEM (MWS)

DESCRIPTION

The Modular Weapon System (MWS) consists of an M16A4 rifle and an M4 carbine version. An M1913 Rail Adapter System (RAS) replaces the upper hand guards and incorporates a removable rear-carrying handle. The RAS provides the capability to mount various accessories, such as a modified M203 launching system, high intensity flashlights, and infrared laser target designators, as well as optics. The MWS M4 carbine variant is selectively fielded to Marines whose billet and/or mission requires the use of the shorter carbine.

OPERATIONAL IMPACT

The MWS will significantly improve the ability to mount various accessories and will enhance accuracy, target detection, and engagement capabilities in both day and night conditions.

PROGRAM STATUS

Fielding of the MWS began in fiscal year 2003. An increase in the Approved Acquisition Objective (AAO) due to complete replacement of M16A2 rifles Marine Corps-wide has extended fielding through fiscal year 2010. The AAO is now ~140,100 M16A4 rifles and approximately 60,000 M4 carbines.

Procurement Profile:	FY2008	FY2009
Quantity	25,560	21,116

Developer/Manufacturer:
M4: Colt Manufacturing Company, Inc., Hartford, CT

M16A4: Fabrique National Military Industries, Columbia, SC

CONVENTIONAL GROUND AMMUNITION

DESCRIPTION

Class V(W) Conventional Ground Ammunition consists of more than 300 individual ammunition and explosives items currently found in the Marine Corps ammunition stockpile. These items support all major weapons systems employed by the Marine Corps to include artillery, tank, small arms (such as 9mm, 5.56mm, 7.62mm, and .50-caliber), rockets, missiles, medium caliber (25mm and 40mm), mine clearance systems, 120mm rifled mortars for the Expeditionary Fire Support System, 30mm in support of the Expeditionary Fighting Vehicle, and the family of 60mm and 81mm mortar ammunition. Conventional ground ammunition also includes individually employed and hand-emplaced material, such as grenades, demolition equipment, pyrotechnics, and signaling devices. Also included are training and mission unique items, such as non-lethal munitions, Special Effects Ammunition Markings System, and Military Working Dog Scent Kits.

OPERATIONAL IMPACT

Ammunition procurements support a wide cadre of Marine Corps requirements that are categorized within two major elements. The first is the War Reserve Munitions Requirement, which includes combat, current operations/forward presence, and strategic readiness requirements. The second is the Training/Testing Requirement, which includes live-fire training and weapons-systems testing. The culmination of these two categories constitutes the Marine Corps' "Total Munitions Requirement" or TMR. With the continuing global missions facing the United States, it is imperative that the Marine Corps maintains a healthy procurement profile to address the growing demands of the Marine forces for both war-reserve and live-fire training. Past efforts within the Procurement Ammunition, Navy and Marine Corps (PAN&MC) appropriation postured the Marine Corps to maintain readiness levels while meeting current demands for ammunition and explosives required for success on the battlefield. During the past two fiscal years, PAN&MC investment has allowed for sufficient flexibility in supporting several munitions based urgent need statements generated by the Operating Forces.

PROGRAM STATUS

While not fully funded across within the fiscal year 2008 Presidents Budget, it is expected that our ammunition processes and the funding profile will continue to ensure sufficient ammunition is available for future combat or peacekeeping operations involving active-duty and Reserve Marine forces. Further, our investments will allow ammunition production to keep pace with the phased growth of the Marine Corps.

PROCUREMENT PROFILE

Utilizing the Marine Corps ammunition stockpile as a baseline, and assessed against the TMR, the fiscal year 2008 and fiscal year 2009 budget includes procurements of approximately 75 individual line

items of ammunition in various quantities. Select representative procurement quantities, by general munitions family, is provided at the following:

Procurement Profile:

Quantity:	FY2008	FY2009
Small Arms Family	103,396,405	132,068,835
Mortar Family	154,437	227,273
Tank Family	12,400	15,230
Artillery	116,609	569,196
Rocket Family	1,149	3,505

Developer/Manufacturer:
Various government and commercial manufacturing facilities, including the following representative sample:

Small Arms Family:
Alliant Tech Systems, Independence, MO; and, General Dynamics Ordnance Systems, Marion, IL

Mortar Family:
American Ordnance, Milan, TN; Medico, Wilkes-Barre, PA; L3 Communications, Lancaster, PA; HITECH, East Camden, AR; Wilkinson Manufacturing, Port Calhoun, NE; and, Armtec Defense Products, Coachella, CA.

Artillery Ammunition:
Chamberlain Manufacturing, Scranton, PA; and, American Ordnance, Middleton, IA

Tank Ammunition:
Alliant Tech Systems, Plymouth, MN; and, American Ordnance, Middleton, IA.

Rockets:
Talley Defense Systems, Mesa, AZ; and, SAAB Bofors Dynamics, Karlskoga, Sweden

MISSION PAYLOAD MODULE NON-LETHAL WEAPONS SYSTEM (MPM-NLWS)

DESCRIPTION

The Mission Payload Module Non-Lethal Weapons System (MPM-NLWS) program is a Marine Corps led, Joint Non-Lethal Weapons Directorate funded program that will develop and field new non-lethal munitions payload technologies designed to render personnel temporarily incapacitated, disoriented, or to immobilize personnel within a specified zone of influence. The objective of the program is to provide a capability to deliver counter-personnel non-lethal effects applicable to controlling crowds, denying or defending areas, controlling access, and engaging threats while providing sufficient standoff for protection of friendly forces.

OPERATIONAL IMPACT

The MPM-NLWS will allow the Marine infantryman to efficiently launch non-lethal munitions to a broader area with a greater duration of effects and volume of fire. Employment of these new non-lethal munitions will grant Commanders additional options short of lethal force and flexibility in implementing Rules of Engagement with less-restrictive measures.

PROGRAM STATUS

MPM-NLWS achieved Milestone A in 2004. A Milestone B decision is expected during fourth quarter, fiscal year 2008.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
TBD

COMMON LASER RANGEFINDER (CLRF)

DESCRIPTION

The Common Laser Rangefinder (CLRF) program is the single program of record responsible for fulfilling existing and future Marine Corps requirements for precision targeting laser rangefinders. CLRF is currently fielding the VECTOR 21B (AN/PEQ-13). The CLRF is a lightweight, class 1 eye-safe, targeting laser rangefinder capable of being carried and employed by a single Marine. It assists the operator in determining target location by measuring distance, direction, and vertical angle from the operator to the object through the use of digital magnetic compass technology. The CLRF aids target detection, recognition, and identification by providing optics similar in magnification and field of view to the M-22 binoculars. The CLRF interfaces with PLGR, DAGR, Target Handoff System, D-DACT, and the AN/PVS-14 for night operations.

OPERATIONAL IMPACT

The AN/PEQ-13 provides forward observers and forward air controllers a man portable tool that assists in target detection, recognition, identification, and location. It provides a target location error of 50m or less at a distance of 5 Km and 100m at a distance of 10 Km. The CLRF has a 7x internal magnification and an external optical enhancer that provides a total magnification of 10x. It is fielded with the DAGR which, when used with the VECTOR-21B, provides a 10-digit grid coordinate to the target that can be used to create an indirect fire mission. It is also fielded with the AN/PVS-14 monocular night vision sight which allows for low light and nighttime operation. The AN/PEQ-13 can also be integrated with the AN/PAS-22 Long Range Thermal Imager to provide locations of targets at greater ranges at night.

PROGRAM STATUS

CLRF is currently in the production and deployment life cycle phase. Initial operational capability occurred in May 2005 with fielding to units in Iraq and Afghanistan. Approximately 1267 systems of the total CLRF Approved Acquisition Objection (AAO) (2044 systems) have been fielded to date. The AAO is anticipated to increase to 2200.

Procurement Profile:	FY2008	FY2009
Quantity	TBD	TBD

Developer/Manufacturer:
Vectronix, Switzerland

Importer: Ashbury International Group, Charlottesville, VA

DAY OPTICS SYSTEMS

DESCRIPTION

The Rifle Combat Optic (RCO) (AN/PVQ-31A/B) is the cornerstone of the day optics program. The RCO is a fixed 4X optical aiming sight designed for use with the M4A1/M16A4 rifle configured with the MIL-STD-1913 Rail Adapter System. It attaches to the rail to provide the user a targeting tool to engage distant daylight and near low-lit targets with increased identification certainty.

The Holographic Diffraction Sight (HDS) is a non-magnified sight that facilitates the rapid engagement of targets at tactical distances. It can be mounted on the M4A1 Close Quarter Battle Weapon (CQBW) and is part of the CQBW collateral equipment set.

The HDS and RCO are compatible with all generations of night vision devices and can be positioned in tandem with Image Intensification systems.

The Medium Machine Gun Day Optic (MDO) and the Squad Automatic Weapon Day Optic (SDO) initiatives will acquire a commercial off-the-shelf, government off-the shelf, and/or non-developmental item solution to rapidly field a day sight for the M240B and the M249, respectively. The program objective is to select and field a high quality, durable, day optic.

OPERATIONAL IMPACT

The RCO is designed to provide enhanced target identification and hit probability for the M4A1/M16A4 rifle out to 800 meters. It is designed with dual illumination technology using a fiber optic light source for daytime illumination and tritium for night and low-light use. This allows the operator to keep both eyes open while engaging targets and maintaining maximum situational awareness.

The HDS employs a heads-up display that eliminates blind spots, constricted vision, and tunnel vision normally associated with tube-type sights. Target identification is improved through increased situational awareness by providing the operator the ability to engage targets with both eyes open. The see-through holographic reticle allows instant target recognition with no obscuration of the point of aim.

The family of machine gun optics will enhance the combat effectiveness of the machine gunner and automatic riflemen by enhancing their situational awareness, protective posture, and the ability to estimate range and positively identify threats prior to engagement.

PROGRAM STATUS

A total of 188,120 RCOs have been procured through fiscal year 2007 with deliveries extending through fiscal year 2008. 4,200 HDS were procured in fiscal year 2007 with deliveries to begin in first quarter fiscal year 2008 and completed in second quarter fiscal year 2008. The MDO/SDO is scheduled for procurement during fiscal year 2008.

Procurement Profile:	FY2008	FY2009
RCO	3,611	3,128
HDS	0	0
MDO/SDO	TBD	TBD

Developer/Manufacturer:
RCO: Trijicon Industries, Detroit, MI.

HDS: EO Tech, L3 Communications, Ann Arbor, MI.

MDO/SDO: TBD

IMAGE INTENSIFIER SYSTEMS

DESCRIPTION

The AN/PVS-14, Monocular Night Vision Device (MNVD) is a lightweight optical night vision device with 3rd generation image intensifier technology. The AN/PVS-14 can be used as a hand-held pocket scope. It can also be worn with a head, helmet, or weapon mount.

The Individual Weapon Night Sight – Image Intensified (IWNS I2) is an individual imaging device capable of acquiring targets at night with increased recognition certainty when used in conjunction with the Rifle Combat Optic (RCO – AN/PVQ-31A/B) variants. IWNS I2 is mountable on all versions of the M16 and M4 series weapons equipped with integral MIL-STD-1913 rail systems. The IWNS I2 is an in-line image intensifying clip-on night sight.

OPERATIONAL IMPACT

The monocular style of the AN/PVS-14 allows the Marine to maintain night eye adaptation in one eye while using the night vision device with the other eye. The AN/PVS-14 can be used in climates ranging from -49 to +123 Fahrenheit thus providing the Marine night vision capability in virtually any climate. The IWNS I2 clip-on device will allow the Marine Infantryman to quickly transform the RCO into a night optic sight, keeping the RCO permanently mounted on the rifle. This will also provide an additional night sight capability within the Marine Infantry Squad.

PROGRAM STATUS

The total of 121,000 MNVDs have been procured through fiscal year 2007 with deliveries extending to fiscal year 2009.

The IWNS I2 contract was awarded in fourth quarter fiscal year 2007 for the approved acquisition objective of 8051 systems. Deliveries will begin in second quarter fiscal year 2008 and extend through fiscal year 2009.

Procurement Profile:	FY2008	FY2009
AN/PVS-14:	15,048	15,040
IWNS I2:	3,000	5,051

Developer/Manufacturer:
AN/PVS-14: ITT Industries Inc., Roanoke, VA

IWNS I2: Insight Technology, Londonderry, NH

INTEGRATED INTRA SQUAD RADIO (IISR)

DESCRIPTION

The Integrated Intra Squad Radio (IISR) is a small, lightweight, handheld radio used for secure voice tactical communications. The two primary components for the IISR are the radio and headset. In addition to the radio and headset, the program office will procure mission-essential accessories for power, supply battery chargers, spare batteries, and variable key loading (KVL 3000). The IISR provides secure digital voice communications to facilitate command and control to small unit leaders, fire team leaders and individual Marines. The headset provides enhanced communications, situational awareness and hearing protection critical to effective war fighting.

OPERATIONAL IMPACT

The IISR is an interim system. Legacy tactical hand-held equipment within the Marine Corps had exceeded its expected life span and was rarely used. As a result, the IISR units primarily consisted of locally purchased, commercially available radios that were not interoperable with legacy combat net radios. The IISR has consolidated and exceeded legacy capabilities, lightened the combat load of individual Marines and small units, and reduced tactical hand-held radio operating costs.

PROGRAM STATUS

The IISR is in the Deployment Phase Post Milestone C. Marine Corps Systems Command currently has a production contract in place that facilitates joint acquisition, with fielding that commenced in fiscal year 2006. The Marine Corps' approved acquisition objective is 47,593 radios.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Motorola, Inc., Columbia, MD

LASER TARGETING AND ILLUMINATION SYSTEMS

DESCRIPTION

The AN/PEM-1 is a Class 2 laser device that emits a highly collimated beam of visible light for precise zeroing. This system facilitates zeroing of I2 sights, thermal weapon sights, and laser aiming devices. The AN/PEM-1 has a low power laser setting that is useful when performing weapon bore sighting during daylight, low light and darkness conditions.

The AN/PEQ-16A is a Class 3b laser device that provides a highly collimated beam of infrared energy for weapon aiming and an adjustable focus infrared beam for target illumination. The AN/PEQ-16A also has a white light illuminator that provides target identification/illumination without the use of night vision devices.

The HPLP (IZLID) is a Class 4 infrared laser pointer and illuminator for use with night vision or infrared sensitive camera systems. The beam is adjustable from tight pinpoint to a wide flood beam with a quick twist of the lens. A multi-position switch allows the laser to operate at 3 different power levels: LOW (500mW); HIGH (900mW); and PULSE (1000mW@304Hz).

The AN/PSQ-18A Grenade Launcher Day Night Sight Mount (GLDNSM) is an enhanced aiming device designed to enable the Marine to rapidly and precisely fire the M203 40mm grenade launcher in daylight, low light, and night conditions.

OPERATIONAL IMPACT

The AN/PEM-1 (LBS) enables Marines to quickly and accurately establish or reconfirm battle site zero (BZO) to weapons without consuming ammunition to verify the zero. The LBS is optimized for 5.56mm, 7.62mm, and .50 caliber weapons and their ancillary targeting devices (i.e., aiming lights, optical night vision, and thermal sights). In the training mode, the LBS will provide Marines with a training tool to practice zeroing skills. Employment of the LBS will reduce ammunition consumption associated with zeroing, and expedite the mission interchange of sights and targeting devices between weapons.

The AN-PEQ-16A will provide increased accuracy for every Marine by providing a laser aiming capability and the ability to illuminate targets in low light and night conditions when using a night vision device, a visible aiming light and an illumination capability to Marines that do not possess a night vision capability, and a visible white light that will allow the Marines to identify/illuminate targets in a low light environment.

The HPLP (IZLID) gives the Marine the option of using a pinpoint target pointer or a wide flood beam with the quick twist of a switch and allows the Marines to use 3 different power levels, low, high, and pulse.

The AN/PSQ-18A GLDNSM provides Marine grenadiers increased first or second round accuracy to within five meters.

PROGRAM STATUS

Procurement of an additional 2251 LBS systems will occur during fiscal year 2008. Procurement of the AN/PEQ-16A began in fiscal year 2007 and will extend through fiscal year 2008 with fielding scheduled to begin in fiscal year 2008. A total of 27 HPLP systems were procured in fiscal year 2007 with an additional 700 systems in fiscal year 2008 due to urgent need requirements to support Operation Iraqi Freedom. An additional 118 AN/PSQ-18A GLDNSMs are anticipated to be procured and fielded in fiscal year 2008.

Procurement Profile:	FY2008	FY2009
AN/PEM-1 (LBS)	2251	TBD
HPLP (IZLID)	700	TBD
AN/PSQ-18A (GLDNSM)	118	TBD
AN/PEQ-16A (MIPIM)	42,477	TBD

Developer/Manufacturer:

LBS/GLDNSM/MIPIM: Insight Technologies, Londonderry, NH

IZLID: B.E. Meyers & Co, Inc., Redmond, WA

TACTICAL HAND-HELD RADIO (THHR)

DESCRIPTION

The Tactical Hand-Held Radio (THHR) is a secure, hand-held unit that provides Marine Corps units with a standardized and maintainable radio to support the communications requirements of small units (platoon, squad, and team). The THHR operates in the AM and FM bands, contains embedded communications security, and is interoperable with other radio systems, such as Single-Channel Ground and Airborne Radio System (SINGARS) and HAVEQUICK II, in the single-channel mode and frequency-hopping modes.

OPERATIONAL IMPACT

The THHR is an interim system. Legacy tactical hand-held equipment within the Marine Corps had exceeded its expected life span and was rarely used. As a result, the hand-held units primarily consisted of locally purchased, commercially available radios that were not interoperable with Marine Corps combat net radios. The THHR has consolidated and exceeded legacy capabilities, lightened the combat load of individual Marines and small units, and reduced tactical hand-held radio operating costs.

PROGRAM STATUS

In fiscal year 2007, the Assistant Secretary of Defense for Networks and Information Integration reinstated the requirement for services to obtain a Joint Tactical Radio System (JTRS) approved product. A JTRS approved product consists of "a radio that is National Security Agency certified, JTRS Technology Laboratory certified, Joint Interoperability Test Command certified, and Software Communications Architecture compliant." Presently, the only two known solutions are the AN/PRC-148(V)(C) by Thales Communications and the AN/PRC-152(V)(C) by Harris Corporation. The Marine Corps' approved acquisition objective is 27,074 radios.

Procurement Profile:	FY2008	FY2009
Quantity:	9,300	0

Developer/Manufacturer:
AN/PRC-148(V)(C): Thales Communications, Inc., Clarksburg, MD

AN/PRC-152(V)(C): Harris Corporation, Inc., Rochester, NY

THERMAL OPTICS SYSTEMS

DESCRIPTION

The Marine Corps has five key thermal optics systems: the Thermal Weapon Sight II (TWS II), which includes the Medium Weapon Thermal Sight (MWTS) (AN/PAS-13C/D (V)2) and the Heavy Weapon Thermal Sight (HWTS) (AN/PAS-13C/D (V)3); Individual Weapon Night Sight-Thermal (IWNS-T); the Mini Thermal Imager (MTI); the Medium Range Thermal Bi-ocular (MRTB); and the Long Range Thermal Imager (LRTI) (AN/PAS-22).

The TWS II provides capabilities similar to its predecessor AN/PAS-13B (TWS I) with technology improvements that reduce weight and provide longer battery life. It is a self-contained lightweight, compact, durable, battery-operated, infrared imaging sensor used for target acquisition. The MWTS and HWTS have the same design, but different telescopes and software. Both TWS II sights come with a MIL-STD-1913 rail grabber interface, including a vertical spacer. The TWS II will be mounted on the M249 in the Infantry Battalions and on all crew-served weapons including the M240, M2 and Mk19.

The IWNS-T is an in-line clip-on thermal sight designed to operate with the Rifle Combat Optic (RCO - AN/PVQ-31A/B). It will detect and recognize targets and threats at 300 meters without affecting the sight picture and battlesight zero of the RCO in all lighting conditions, including total darkness, and atmospheric obscurants such as smoke and fog.

The MTI is a pocket thermal device with integrated infrared laser pointer that can detect and recognize targets and threats up to 150 meters. The device is intended for use by small unit leaders in close quarters scenarios in all lighting conditions and atmospheric obscurants.

The MRTB will provide small unit leaders with the ability to detect and recognize potential threats in a limited visibility environment within tactical ranges up to 850 meters. The bi-ocular design enhances human performance elements that improve operational use.

The LRTI will be employed by Force and Division Reconnaissance Units, and target acquisition units (forward observers, forward air controllers, etc.) providing a long range observation capability, approaching 7,500 meters, and significantly increases the lethality and survivability of the Warfighter.

OPERATIONAL IMPACT

New thermal optics systems provide a complementary capability that will broaden the range of environments and conditions in which Marines are able to effectively operate. Because thermal optics are not subject to background light "wash-out", they are ideal for use in both day and night lighting conditions, including total darkness. Additionally, thermal optics can be used under conditions of limited visibility such as darkness, smoke, fog, dust and haze.

PROGRAM STATUS

A total of 16,123 TWS II AN/PAS-13C/D systems have been procured through fiscal year 2007 with manufacturer deliveries continuing in fiscal year 2008-2009. Contract award for the IWNS-T is scheduled for first quarter fiscal year 2008 with deliveries planned for fiscal year 2008-2009. A total of 658 MTIs were procured during fiscal year 2007 with deliveries through the first quarter fiscal year 2008. The MRTB is scheduled for contract award and procurement during fiscal year 2008 to support an approximate acquisition objective of 4,000 to 5,000 systems. A total of 1,297 LTRIs were procured during fiscal year 2006-2007 with deliveries extending through fiscal year 2008.

Procurement Profile:	FY2008	FY2009
TWS II (AN/PAS-13D)	3,902	4,705
TWS II (AN/PAS-13C)	0	1,698
IWNS-T	1,266	926
MTI	32	0
MRTB	TBD	TBD
LRTI	0	0

Developer/Manufacturer:
AN/PAS-13D TWS II: DRS Technologies, Melbourne, FL

AN/PAS-13C TWS II: BAE Systems, Lexington, MA

MTI/IWNS-T: Insight Technology, Londonderry, NH

MRTB: TBD

LRTI: Kollsman Inc, Merrimack, NH

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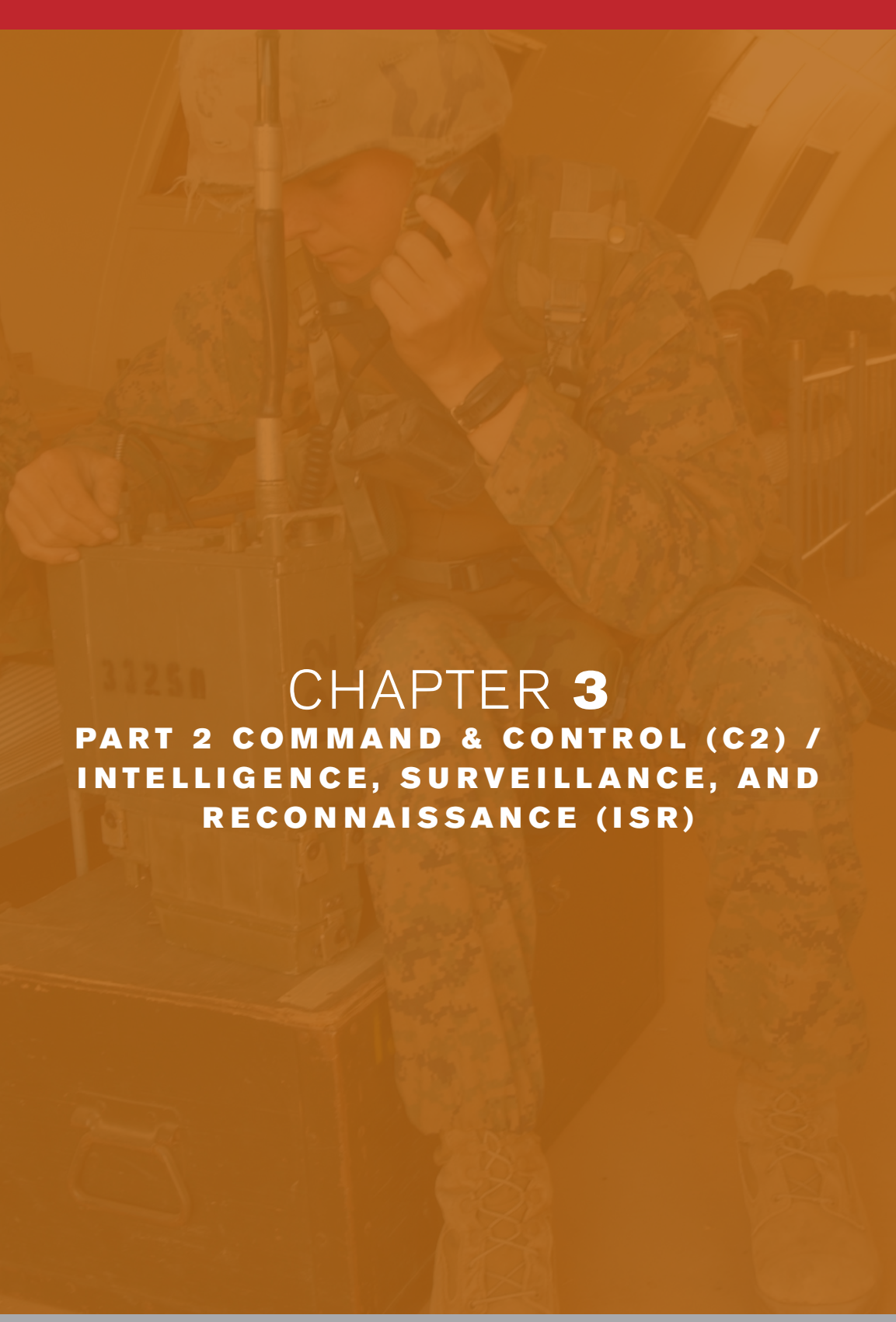

CHAPTER 3

PART 2 COMMAND & CONTROL (C2) / INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

INTRODUCTION

Leading-edge technologies and systems are dramatically increasing the tactical "reach" of the Individual Marine, which is no longer limited by the range of his rifle or the distance he can throw a hand grenade. Indeed, operations at the squad level and Individual Marine—the "pointed end of the spear"—can have now far-reaching operational-level if not strategic impacts. The need is thus growing for enhanced command-and-control capabilities, which include communications, intelligence, surveillance and reconnaissance, to network operational relationships from the headquarters to the Individual Marine on the ground or in the air. For example, we are fielding additional equipment to infantry battalions to enable Individual Marines to fight and win on the distributed and non-linear battlefield.

The Marine Corps' Command & Control (C2) Harmonization Strategy incorporates joint integrating concepts and C2 mandates and articulates our goal of delivering an end-to-end, fully integrated, cross-functional capability to include forward-deployed and reach-back functions. The strategy's goal is a seamless capability that crosses war fighting functions and supports the Individual Marine from the supporting establishment at home to our Marines in contact with the enemy, taking the best of emerging capabilities and joint requirements to build a single solution. Our C2 Harmonization

Strategy will also increase our capability to train our staffs through MAGTF Integrated System Training Centers.

A critical first step in this direction is the ongoing development of the Common Aviation Command and Control System (CAC2S). CAC2S fuses data from sensors, weapons systems and other C2 systems into a single integrated display. It allows rapid flexible operations in a common, modular and scalable design by reducing the current stovepipe systems into one hardware/software solution with streamlined equipment training. CAC2S will enable Marine Air Ground Task Force (MAGTF) commanders to control the timing of organic, joint, or coalition air power, assault supports and Intelligence, Surveillance, and Reconnaissance (ISR) in their battlespace while operating within a joint task force

The Marine Corps continues to increase its ISR capabilities through the use of an enterprise approach known as the Marine Corps ISR Enterprise (MCISR-E)—resulting in a fully integrated architecture compliant with joint standards for data interoperability. MCISR-E will provide networked combat information and intelligence down to the squad level across the range of military operations. To ensure Marines have access to these new capabilities, our MAGTF C2 systems feed combat operation centers with information from wide field of view persistent surveillance systems such as Angel Fire, traditional ISR systems such as our family of Unmanned Aircraft Systems and unattended ground sensors, and non-traditional collection assets such as Ground-Based Operational Surveillance System.

The programs discussed in this section will enable MAGTF commanders to exercise effective command and control and conduct ISR operations. In addition, these programs support the ability of MAGTFs to participate in or lead joint and multinational operations. Importantly, they will ensure that Individual Marines understand their commanders' intent and can carry out complex operations—in peacetime, crisis and war—that safeguard vital U.S. interests, citizens and friends.

DISTRIBUTED COMMON GROUND SYSTEM – MARINE CORPS (DCGS-MC)

DESCRIPTION

The Distributed Common Ground System – Marine Corps (DCGS-MC), in compliance with the Department of Defense DCGS Family of Systems concept, is a service-level effort to migrate select USMC Intelligence, Surveillance, and Reconnaissance (ISR) processing as well as exploitation capabilities into a single, integrated net-centric baseline. As the Processing, Exploitation, Analysis & Production component of the Marine Corps ISR Enterprise concept, DCGS-MC will consist of functional capability sets that support Marine intelligence analysts across the Marine Air Ground Task Force by making organic and external all-source ISR data more visible, accessible, and understandable.

The DCGS-MC concept originated with the DCGS Mission Area Initial Capabilities Document Joint Requirements Oversight Council Memorandum 001-03, dated 6 Jan 03, which established the overarching requirements for a collection of net-centric capable systems that will contribute to joint and combined warfighter needs for ISR support. Each service is directed to pursue a coordinated developmental path based on the implementation of common enterprise standards and services consistent with the Department of Defense's net-centric vision. The DCGS Integration Backbone (DIB) is intended to be the basic building block for interoperability between the Services' DCGS programs. DCGS is currently managed by a separately charted DIB Management Office that directs day-to-day developmental efforts in coordination with the Army, Navy, Marine Corps, and US Special Operations Command DCGS program offices with oversight provided by Office of the Under Secretary of Defense (Intelligence).

OPERATIONAL IMPACT

The program objectives are to migrate select ISR processing and exploitation capabilities for raw intelligence data and to provide enhanced knowledge management of finished intelligence products on an integrated baseline featuring fully open enterprise architecture and modular hardware components. The program is anticipated to enter the technology development phase in early fiscal year (FY) 2008 and will leverage heavily from the developmental efforts of its sister Services' DCGS programs, as their own developmental efforts are fully underway.

PROGRAM STATUS

The DCGS-MC program is proceeding as an Acquisition Category III program with Commander, Marine Corps Systems Command designated as the program's Milestone Decision Authority. The program acquisition strategy is based on an incremental development path optimized to rapidly introduce government and commercial technologies, enterprise standards, and modular hardware components in order to minimize costs and program risk.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
TBD

MARINE CORPS INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE ENTERPRISE (MCISR-E)

Marine Corps Intelligence must be prepared to transition our capabilities into the future Defense Intelligence Enterprise in order to ensure interoperability with the other Services and national agencies. We are actively transforming the partially networked Distributed Common Ground/Surface System - Marine Corps (DCGS-MC) into a net-centric Intelligence, Surveillance and Reconnaissance (ISR) Enterprise. This enterprise solution will be called the Marine Corps ISR Enterprise (MCISR-E) and will include all USMC ISR assets and functions, covering the entire range of ISR Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities. The migration to MCISR-E relies on the standards provided by the DCGS Integrated Backbone to ensure interoperability amongst all the Services' DCGS systems.

Unlike DCGS-MC which only addresses the analysis and production tasks, MCISR-E will encompass the entire Intelligence Cycle. This will strengthen the Marine Corps operational planning and decision-making processes. The process begins with our ability to see and task ISR platforms (persistent ISR), while executing the entire intelligence cycle simultaneously. This will include everything in the cycle from the sensors through the initial posting of the collected data, processing, exploitation, production, storing of resultant intelligence products, and, most importantly, the use of intelligence by commanders and staffs (actionable intelligence). MCISR-E leverage the collaborative capabilities offered by developing communications technology, thereby enabling reachback to garrison locations for substantial intelligence analysis and production support. We will have enhanced interoperability and access to national, theater and other intelligence agencies. MCISR-E will facilitate rapid processing of data into actionable intelligence through user-friendly displays, software, tools, and decision aids.

The web-based nature of this architecture, leveraging the best commercial standards in use throughout the world today, will establish an unrivaled ISR operational capability to support Marines at all levels and "in every clime and place" in order to continue our history of success in the future.

AVIATION COMMAND AND CONTROL

The Marine Air Control Group provides the Aviation Combat Element commander with the Marine Air Command and Control System (MACCS) agencies necessary to exercise command and control of aviation assets in support of Marine Air Ground Task Force (MAGTF), naval, and joint operations. These agencies provide the ability to plan, coordinate, command, and supervise the application of the six functions of Marine Aviation.

While the MACCS is sustaining its existing systems to support today's combat operations, it is also modernizing its expeditionary air command and control (C2), sensor, and weapons capabilities in an effort to be fielded between fiscal year 2008 and fiscal year 2017. The key thrusts of this modernization effort are focused on expeditionary packaging, modern information technology, and joint integration.

In conjunction with equipment modernization, Marine Aviation C2 is supporting a number of new initiatives that will bring new capabilities, improved doctrine and training, and organizational change that will ensure more efficient and effective aviation support to expeditionary naval joint, and coalition forces. This effort is being guided by the Aviation C2 Transformation Task Force (TTF) under the guidance of Headquarters, Marine Corps (HQMC) Aviation Command and Control (APC).

AVIATION C2 TRANSFORMATION TASK FORCE

The Deputy Commandants for both Aviation and Combat Development chartered the Aviation C2 TTF in November 2002 to ensure the effective introduction of the Aviation C2 family of systems (FoS) into the operating forces. The Marine Corps has programmed the FoS fielding between fiscal year 2008 and fiscal year 2017. The cornerstone of the Aviation C2 FoS, the Common Aviation C2 System (CAC2S), will reach Initial Operational Capability (IOC) in fiscal year 2009. Next, networked ground-based sensors and unmanned aerial vehicles are scheduled to reach Initial Operating Capability between fiscal year 2010 and fiscal year 2011. The TTF provides a proactive mechanism for HQMC advocates, expeditionary force development organizations, acquisition commands, supporting establishment activities, and operating forces to formulate and implement changes to Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities (DOTMLPF). The TTF membership is comprised of operating force and supporting establishment stakeholders.

MACCS-X

To support testing and combat development of future Aviation C2, the Marine Corps established the MACCS-X Operational Development Team (ODT) in July 2005. The mission of MACCS-X ODT

is to provide developmental and operational test support, evaluate the concept of employment for the transformation of the MACCS, and validate DOTMLPF concepts and recommendations.

MARINE AVIATION C2 VISION

The vision for Aviation C2 is the development of a system that contains expeditionary multi-functional C2 nodes able of performing the full array of aviation C2 functions throughout the range of military operations. Our system must seamlessly integrate with all existing C2 systems and fully support the MAGTF and Joint Force commanders from the demands of the initial 72 hours of battle to the follow on demands of Phase Four operations. As we proceed forward, we will transform incrementally replacing our existing capability with the most capable, effective and responsive system that technology, resources and personnel can provide.

COMMON AVIATION COMMAND AND CONTROL SYSTEM (CAC2S)

DESCRIPTION

The Common Aviation Command and Control System (CAC2S) will provide a complete and coordinated modernization of the equipment of the Marine Air Command and Control System (MACCS). CAC2S will eliminate current dissimilar systems and provide the Aviation Combat Element with the necessary hardware, software, and facilities to effectively command, control, and coordinate air operations while integrated with naval and joint command and control (C2). CAC2S will be comprised of standardized modular and scalable tactical facilities, hardware, and software that will increase the mobility of the MACCS. In 2005 the Marine Requirements Oversight Council chose CAC2S along with Command and Control Personal Computer as foundation components of Marine Air Ground Task Force (MAGTF) C2. This decision paves the way for improved integration across the MAGTF.

OPERATIONAL IMPACT

CAC2S, in conjunction with MACCS organic sensors and weapons systems, supports the tenets of Expeditionary Maneuver Warfare and fosters joint interoperability with the C2 systems. CAC2S will replace legacy C2 systems in the following Marine aviation C2 agencies: Tactical Air Command Center (TACC), Tactical Air Operations Center (TAOC), Direct Air Support Center (DASC), Marine Air Traffic Control Detachment, and Low Altitude Air Defense Battalion.

PROGRAM STATUS

CAC2S is being developed in two increments as part of an evolutionary acquisition strategy. Increment I will replace the functionality of the TACC, DASC and TAOC, and will baseline the core information fusion and management function common to all increments. Increment II will achieve integration between CAC2S and the Air Traffic Navigation and Coordination System for Air Traffic Control functionality. CAC2S is an Acquisition Category II Program in the system development and demonstration phase. CAC2S completed an operational assessment during October 2006. Initial operational capability is planned for fiscal year 2009.

Procurement Profile:	FY2008	FY2009
Quantity:	12	12

Subsystems (Low Rate Initial Production)

Developer/Manufacturer:
Raytheon Integrated Defense Systems, San Diego, CA

AN/TPS-59(V)3 RADAR SYSTEM

DESCRIPTION

The AN/TPS-59(V)3 radar system is the Marine Corps' only long-range, 3-Dimensional, air surveillance, Theater Ballistic Missile (TBM) capable radar. The AN/TPS-59(V)3 radar system is a transportable, solid-state, L-band radar. It is the Marine Air Ground Task Force's (MAGTF) principal air surveillance radar and is integrated into the AN/TYQ-23(V)4 Tactical Air Operations Module. It may also be configured for operation with the AN/MSQ-124 Air Defense Communications Platform to provide TBM track data to the Joint Tactical Information Distribution System. The radar has become a key component in the employment of the Navy's Cooperative Engagement Capability and is the Marine Corps' lead sensor in the development of the Composite Tracking Network.

OPERATIONAL IMPACT

The AN/TPS-59(V)3 is optimized to detect and track TBMs and air-breathing targets, either of which can be serious threats to MAGTF operations. The AN/TPS-59(V)3 will primarily be used to support MAGTF aviation during sustained operations ashore and as part of a joint theater air and missile defense architecture. The radar supports the MAGTF commander in Anti-Air Warfare operations with en route traffic control to a distance of 300 nautical miles (NM) and TBM surveillance to 400 NM. Eight of the 11 AN/TPS-59(V)3 radar systems were deployed during Operation Iraqi Freedom and Operation Enduring Freedom, with five radars deployed in direct support.

PROGRAM STATUS

The AN/TPS-59(V)3 is in the sustainment phase of its life cycle. Incorporation of engineering change proposals and technical refresh of equipment will address ongoing diminishing manufacturing sources and obsolescence issues as well as improved capabilities and new interface requirements.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Lockheed Martin Corporation, Syracuse, NY

COMPOSITE TRACKING NETWORK (CTN)

DESCRIPTION

Composite Tracking Network (CTN) is the adaptation of the United State's Navy Cooperative Engagement Capability (CEC) modified for Marine Corps use. This network will allow Marine Corps Command and Control (C2) agencies to distribute composite tracking data and fire control data to C2 nodes and weapon systems. CTN is an essential element of the future Marine Corps Command, Control, Communications, Computers and Intelligence architecture.

OPERATIONAL IMPACT

CTN will provide the Marine Air Ground Task Force (MAGTF) Commander a sensor netting solution that will help defend friendly forces from incoming aircraft and cruise missiles by correlating sensor data from local and remote radars in the CEC network. It will provide the MAGTF precise, target quality track data simultaneously to networked nodes thereby increasing and improving situational awareness and battlespace coverage.

PROGRAM STATUS

CTN is developing and testing adaptive layers that interface CTN with the Tactical Air Operations Module, Common Aviation Command and Control System, and the AN/TPS-59 long range radar. Milestone B was approved 1st Qtr fiscal year 2008 and Milestone C is scheduled for 2nd Qtr fiscal year 2008. Initial operational capability is scheduled for 3rd Qtr fiscal year 2009.

Procurement Profile:	FY2008	FY2009
Quantity:	0	4

Developer/Manufacturer:
NSWC, Crane; Crane, Indiana

GROUND/AIR TASK ORIENTED RADAR (G/ATOR)

DESCRIPTION

Ground/Air Task Oriented Radar (G/ATOR) is an expeditionary, high mobility multi-wheeled vehicle-based single materiel solution to fill the Multi-Role Radar System and Ground Weapon Locating Radar's operational requirements. G/ATOR has four incremental deliveries. Increment I is a medium-range air surveillance radar used to detect and track aircraft, cruise missiles, and unmanned aerial vehicles. The system will serve as a gap-filler radar by providing three-dimensional coverage of those areas out of view of the AN/TPS-59 (V) 3. The radar is intended to replace all the missions currently associated with the AN/TPS-63 and AN/MPQ-62 radars. Increment II provides the next-generation ground weapon locating radar. The G/ATOR will replace the AN/TPQ-46A as the Marine Corps hostile indirect fires target locating system. The primary mission of the G/ATOR, employed in the counter fire role, is to locate mortar, artillery, and rocket threats and provide accurate location information to friendly counter fire weapons. The secondary role of the counter fire G/ATOR is to provide "did hit" data to friendly weapon systems for adjust fire and battle damage assessment. Increment III will improve upon Increment I's air mission capabilities. Enhancements include: Advance Combat ID circuitry and software (non-cooperative target recognition), integrated Cooperative Engagement Capability/ Composite Tracking Network, advanced ECCM capabilities (decoys), Radar Environmental Simulator and Integrated Data Environment capabilities. Increment IV will add air traffic control functionality and replace the AN/TPS-73 radar and the Airport Surveillance Radar portion of the AN/TPN-31A Air Traffic Navigation, Integration, and Coordination System.

OPERATIONAL IMPACT

G/ATOR will have the responsiveness needed to detect, identify, and track enhanced, low-level air-breathing targets, as well as indirect fire threats during the execution of Expeditionary Maneuver Warfare operations. In addition, the radar will be capable of cueing and reporting on targets detected within its coverage limits to designated air and ground command and control agencies. The reduced logistical footprint of the radar will enhance the capabilities of the Marine Air Command and Control System and artillery regiments in support of all phases of MAGTF operations. It will possess the mobility required to keep pace with supported maneuver elements and will complement the Marine Corps long-range radar, the AN/TPS- 59 (V) 3, by providing accurate low-level tracks. The G/ATOR's ground and air mission capabilities give the MAGTF commander a unique operational flexibility.

PROGRAM STATUS

G/ATOR Increment I has an ASN (RD&A) approved Milestone B in 2005 and is currently in the System Development and Demonstration Phase. The In-

crement I contract was awarded in Mar 07 to Northrop Grumman with a scheduled Initial Operational Capability of Sep 2011. Increment II Milestone B decision is expected during July 2007, Increment III Milestone B is expected during December 2008, and Increment IV Milestone B is expected by November 2012.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Northrop Grumman

ASSAULT AMPHIBIOUS VEHICLE – COMMAND; COMMAND AND CONTROL UPGRADE PROGRAM (AAVC7A1 C2 UPGRADE)

DESCRIPTION

The Assault Amphibious Vehicle – Command; Command and Control Upgrade Program (AAVC7A1 C2 Upgrade) is focused on providing an improved command and control (C2) capability to the Operating Forces until the Expeditionary Fighting Vehicle is fielded. The AAVC7 C2 Upgrade Program will include replacement of the current antiquated UHF and HF tactical radios with the currently fielded radio systems, integration of a UHF-Satellite Communications (SATCOM) capability, replacement of the vehicle intercommunications system, integration of a Blue Force Situational Awareness (BFSA) capability, redesign of the staff workstations, and integration of a tactical data network capable of hosting applicable Marine Air Ground Task Force C2 applications. (Advanced Field Artillery Tactical Data System (AFATDS), C2 Personal Computer (C2PC), Intelligence Operations Server (IOS) V1)

OPERATIONAL IMPACT

The AAVC7A1 C2 upgrade program will provide the supported infantry battalion/regimental staffs with an improved C2 capability needed to address the C2 capabilities gap that currently exists during amphibious operations. Specific operational improvements are the addition of a UHF-SATCOM capability, integration of a BFSA capability, and the integration of a tactical data network capable of hosting AFATDS, C2PC, and IOS V1.

PROGRAM STATUS

The AAVC7A1 C2 Upgrade Program was designated an Acquisition Category IV (T) program on 31 August 2007 and is slated to enter the System Development and Demonstration Phase of the project Life Cycle during the 2nd Quarter (QTR) fiscal year 2008. Initial Operational Capability is planned for fiscal year 2009 and Full Operational Capability is planned for fiscal year 2010.

Procurement Profile:	FY2008	FY2009
Quantity:	8	31

Developer/Manufacturer:
SPAWAR Charleston, SC

GLOBAL BROADCAST SERVICE (GBS)

DESCRIPTION

Global Broadcast Service (GBS) is a smart-push/user-pull satellite communications system that provides large volumes of information to deployed, on-the-move and in garrison forces. The receive suite will receive and disseminate global broadcasts, at up to 23 megabits-per-second of classified and unclassified (two different enclaves) standard information products such as: Imagery, Intelligence, Video (NTSC and Digital), Theater message traffic, Joint and service-unique news, Weather, Morale Welfare and Recreation programming, mapping, logistics, unclassified/classified access, documents such as Air Tasking Orders or Operations Plans as well as audio and video feeds such as civilian broadcast news, (i.e. CNN, FOXNEWS) and Predator unmanned aerial vehicle transmissions. The Marine Corps will procure and field the Transportable Ground Receive Suite (TGRS) portion of the GBS (AN/TSR-9).

OPERATIONAL IMPACT

GBS will augment other communications systems and provide a continuous, high-speed, one-way information flow to deployed, mobile or garrison forces. GBS will support routine operations, training and military exercises, special activities, crisis, situational awareness, weapons targeting, reconnaissance, and the transition to and conduct of opposed operations short of nuclear war. The system will consistently provide the warfighter with information that allows him to take action inside the decision cycle time of his adversaries.

PROGRAM STATUS

The GBS is a joint program and is currently in the Production and Deployment phase of the acquisition process. The Marine Corps Approved Acquisition Objective (AAO) is 81 TGRSs. The program has fielded 61 of the 81 AAO. The remaining 20 TGRSs have been procured and are currently in production. Fielding of the AAO will be completed in fiscal year 2008.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Raytheon, Reston, VA

INTELLIGENCE ANALYSIS SYSTEM FAMILY OF SYSTEMS (IAS FOS)

DESCRIPTION

The Intelligence Analysis System (IAS) Family of Systems (FoS) uses a three-tiered approach for receiving, parsing, analyzing, and disseminating fused all-source intelligence data. The first tier, the Marine Expeditionary Force (MEF) IAS, is a mobile system that supports the MEF Command Element. The second tier, the Intelligence Operations Server (IOSv2a or IOSv3), is a team portable system designed to support the Intelligence Operations of the Major Subordinate Commands (MSC). The third tier, the Intelligence Operations Work-station (IOWv2), serves as the intelligence link for the battalion and squadron commands to higher headquarters. It can also operate as a stand-alone system.

OPERATIONAL IMPACT

Fielding of the MEF IAS has provided Marine Air Ground Task Force commanders with a mobile, all-source, intelligence data fusion and dissemination capability. The IOSv2a (Unix) and IOSv3 (Windows) give the commander at the MSC, Marine Expeditionary Unit, regiment, and group levels access to time-sensitive intelligence data that is crucial to the decision making process and the conduct of Intelligence Preparation of the Battlefield. The IOW is the link to intelligence data for the battalion and squadron level of command, using client/server technology for a "reach back" capability to higher commands for intelligence information updates. The IOWv2 can also function as a stand-alone workstation, operating with certain limitations in a disconnected environment.

PROGRAM STATUS

The MEF IAS is currently in the post production/fielding phase of the acquisition process. All systems were fielded to the operational forces along with receiving Marine Reserve units. The entire IAS FoS was refreshed during fiscal year 2006 and will be again in 2009.

Procurement Profile:	FY2008	FY2009
Software:	1	1
Service Pack:	1	1
IAS FoS Refresh		1

The IAS FoS executes periodic hardware and peripheral refreshes as per the PM NMCI/IT refresh schedule. One major software fielding and one service pack is fielded per fiscal year.

Developer/Manufacturer: MTC Services Corporation Stafford, VA; KnowBiz San Diego, CA; EMA Charleston, SC; & SPAWAR Charleston, SC

Hardware components: Commercial-off-the-shelf (COTS) and non-developmental items.

Software components:
Various COTS and government-off-the-shelf (GOTS) developers
Key GOTS software developers:

System integration of hardware and software: EMA Charleston, SC; Dynamic Tactics for C4ISR Solutions Charleston, SC; L-3 Communications Virginia Beach, VA; SRC Charleston, SC; & SPAWAR Charleston, SC.

JOINT SURVEILLANCE TARGET ATTACK RADAR SYSTEM, COMMON GROUND STATION (JSTARS)

DESCRIPTION

The Joint Surveillance Target Attack Radar System, Common Ground Stations (JSTARS) is a long-range, air-to-ground surveillance system which consists of an airborne element and a ground element. The airborne element, the E-8C aircraft, contains a large phased array radar mounted on the fuselage and multiple OZ-63 Air Data Terminal (ADT) operator terminals. Radar data is distributed via an encrypted, jam-resistant Surveillance and Control Data Link (SCDL) for transmission to one of two JSTARS ground systems: the Common Ground Station (CGS) or Joint Services Workstation (JSWS). The sensor suite provides detection and tracking data on targets through the use of the Moving Target Indicator (MTI), Fixed Target Indicator (FTI), and Synthetic Aperture Radar (SAR). FTI and MTI data are used to detect, locate, and identify the movement of enemy targets, while SAR identifies critical fixed targets such as bridges, harbors, airports, buildings or stationary vehicles. The CGS is a ground-based receiving and processing display system which receives JSTARS data directly from the E-8C JSTARS aircraft through the SCDL to the Ground Data Terminal. Once JSTARS data is collected at the ground receive site, MTI/FTI/SAR data is sent across the Marine Air Ground Task Force Command, Control, Communications, Computers and Intelligence network through existing and evolving tactical data networks. The CGS is also capable of receiving and fusing imagery data from unmanned aerial systems directly onto JSTARS data, providing an enhanced collection processing capability. The JSWS is a functionally equivalent, transit cased subset of the CGS. While the JSWS can be used in conjunction with a dedicated SCDL it typically gets its JSTARS data via a classified network connection or satellite communications feed.

OPERATIONAL IMPACT

The CGS and JSWS support a wide range of global missions including wartime, battlefield management, full spectrum management, peacekeeping operations, the war on drugs and contingency operations. Capable of operating in diverse climates (geographic and weather conditions), the CGS allows commanders to view the battlespace and make decisions with the highest possible level of certainty. As an all-weather, organic Marine Corps intelligence asset, the CGS and JSWS have played a crucial role on the Global War on Terrorism, resulting in JSTARS assuming an additional mission of Improvised Explosive Device prevention and detection.

PROGRAM STATUS

As a joint program that is post-Milestone "C", JSTARS is in the production and deployment phase. The Marine Corps has fielded three JSTARS CGSs and five JSWSs. Each Marine Expeditionary Force has a CGS and JSWS. The remaining two JSWSs are used for testing, evalu-

ation and development of future MTI capabilities.

The program is currently conducting two levels of effort: maintenance and upgrade of the current JSTARS ground systems, and research and development of future MTI collection capabilities.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Prime Hardware Integrator: General Dynamics Command, Control, Communications, and Computers (GC4S), Scottsdale, AZ

Software Integrator: Harris Corporation, Melbourne, FL

Surveillance Control Data Link (SCDL)
Developer: Cubic Defense Systems, San Diego, CA

MARINE AIR-GROUND TASK FORCE SECONDARY IMAGERY DISSEMINATION SYSTEM (MSIDS)

DESCRIPTION

The Marine Air Ground Task Force (MAGTF) Secondary Imagery Dissemination System (MSIDS) is the Family of Systems (FoS) that provides organic tactical digital imagery collection, transmission and receiving capability to the MAGTF Commander. MSIDS is comprised of components necessary to enable Marines in all echelons of the Marine Expeditionary Force, including battalions and squadrons, to capture, manipulate, annotate, transmit and receive images in near-real-time, internally with subordinate commands. The MSIDS capability resides at the MAGTF G/S-2 sections, ground reconnaissance units, and infantry Surveillance Targeting Acquisition platoons. MSIDS FoS is currently employed in every location where the Marine Corps conducts military operations. MSIDS is comprised of commercial-off-the-shelf (COTS) equipment.

OPERATIONAL IMPACT

MSIDS provides the only self-contained, hand-held, ground-prospective imagery capability to MAGTF reconnaissance units. This imagery is essential for mission planning and intelligence. Other MAGTF near real-time imaging systems, such as unmanned aerial systems and F/A-18 Advanced Tactical Airborne Reconnaissance System, provide only overhead imagery and cannot capture the detail and ground perspectives available through MSIDS. In asymmetric threat environments - where targets of interest are often small, highly mobile units such as terrorists or guerilla groups - it is imperative that the MAGTF be able to identify individuals and structures from the ground level. The required level of detail is not available from overhead sources. Technology insertions via an increment refresh plan will enable reconnaissance Marines equipped with MSIDS to receive needed technological upgrades in a more timely fashion.

PROGRAM STATUS

The Marine Corps refreshed the entire MSIDS imagery capability during fiscal year 2002. The approved MSIDS acquisition strategy specifies a refresh of 1/3 of system components. This is done through a spiral increment of the COTS hardware and software components. The fiscal year 2008 refresh will consist of replacing all handheld computers and updating the operating software as well as procuring and fielding MSIDS equipment in support of the 202K initiative. The fiscal year 2009 refresh will consist of components for the Video Exploitation Workstation (VEW) and a continuation of the 202K initiative and fielding. This effort is essential to the MSIDS life-cycle support. Moreover, it keeps the equipment from becoming obsolete, unreliable, and unsupportable.

Procurement Profile:	FY2008	FY2009
Quantity:		
MSIDS computers/SW:	250	100
Personal Data Controllers:	250	100
Cameras Night Vision	200	100
Thermal:	0	100

Developer/Manufacturer:
Canon, Panasonic and ITT

TACTICAL DATA NETWORK (TDN)

DESCRIPTION

The current Tactical Data Network (TDN) augments the existing Marine Air Ground Task Force (MAGTF) communications infrastructure by forming the communications backbone for MAGTF tactical data systems. The TDN system consists of gateways (TDN Gateways) and servers (Data Distribution Servers (DDS)), interconnected with one another and their subscribers via a combination of common-user, long-haul transmission systems, in conjunction with local area networks. TDN brings a scalable system of devices that will provide a robust data communications backbone to the commander.

OPERATIONAL IMPACT

TDN provides its subscribers with secure and non-secure access to strategic, supporting establishment, joint and other-service component tactical data networks, with the capability to send and receive electronic messages, share files, as well as provide a solid backbone for an Active Directory architecture.

PROGRAM STATUS

The Marine Corps has completed fielding and new equipment training of TDN Data Distribution Systems-Reset (DDS-R) in response to an urgent and compelling Global War On Terror requirement.

TDN (Gateway) Refresh will begin testing during 2nd Quarter (QTR) fiscal year 2008, with fielding to begin 3rd Qtr fiscal year 2008.

The contract to procure a modular DDS variant is expected to be awarded during 2nd Qtr fiscal year 2008.

Procurement Profile:	FY2008	FY2009
Quantity:		
Gateway upgrades	31	0
Modular DDS variants	350	40

Developer/Manufacturer:
TDN (DDS-R)
General Dynamics Communication Systems, Taunton, MA

TDN (Gateway)
SPAWAR
Charleston, SC

Modular DDS variants (DDS-M)
TBD

TACTICAL EXPLOITATION GROUP (TEG)

DESCRIPTION

The Tactical Exploitation Group (TEG) is the primary tactical imagery exploitation system in the Marine Corps. Modular and scaleable, the TEG employs a tiered approach consisting of two echelon-tailored configurations—the TEG-Main (TEG-M) and the TEG-Remote Workstation (TEG-RWS). At the Marine Expeditionary Force (MEF) level, the TEG-M serves as a deployable Imagery Intelligence (IMINT) ground station capable of data linking imagery directly from theater and tactical reconnaissance platforms such as the F/A-18D (R/C), the U-2, and Global Hawk. For support to echelons below MEF, the TEG-RWS is a deployable IMINT workstation designed to access national, theater, or tactical imagery repositories via classified network and/or Global Broadcast System to support tailored on-site imagery analysis during deployments. The TEG disseminates secondary imagery products and imagery exploitation reports to the MEF commander and subordinate commanders in support of tactical operations, strike planning, precision targeting, detection and location of targets of opportunity, and combat damage assessment for re-strike planning and intelligence assessment. The TEG employs commercial off-the-shelf, government off-the-shelf, and non-developmental item computer hardware and software to enable rapid upgrades, as well as maintain commonality and interoperability with other Marine Corps joint intelligence and imagery systems.

OPERATIONAL IMPACT

The TEG provides the MAGTF and/or Joint Task Force commander with an organic capability to produce IMINT in support of operations. Anticipated upgrades will enable the processing of imagery from additional unmanned aerial systems emerging sensors and platforms; improve video capture and exploitation capabilities; enhance net-centric functionality; and increase modularity.

PROGRAM STATUS

The TEG is an Acquisition Category III program which received a favorable Milestone C fielding decision in fiscal year 2005 and was granted approval by the Milestone Decision Authority to enter the Production and Deployment Phase. Initial operational capability was achieved in fiscal year 2005. Fielding of TEG-M occurred during fiscal year 2006 with full operational capability anticipated during fiscal year 2008. The TEG-RWS recently completed a technology refresh as the result of an Engineering Change Proposal (ECP). This included a transition from the UNIX operating system to Windows. Production and fielding was completed during third quarter fiscal year 2007 for 113 RWSs. The TEG-M has begun a spiral

upgrade focusing on increased modularity and net-centric capability as the result of an ECP. Production is underway with a first article delivery planned for first quarter CY 2008. As the IMINT component of the Distributed Common Ground Surface/System - Marine Corps (DCGS-MC), TEG is scheduled to fully migrate to DCGS-MC in the 2011 timeframe.

Procurement Profile:	FY2008	FY2009
Quantity:	113	5

Developer/Manufacturer:
Prime Hardware Integrator: Northrop Grumman, Linthicum, MD

Software Integrator: Northrop Grumman, Linthicum, MD,

Common Data Link: L3 Communications, Salt Lake City, UT

TACTICAL HYDROGRAPHIC SURVEY EQUIPMENT (THSE)

DESCRIPTION

Tactical Hydrographic Survey Equipment (THSE) provides a means for underwater charting, navigation, and hydrographic survey of selected littoral frontages. The THSE will provide tactical underwater navigation and hydrographic data into littoral penetration points in support of the Marine Air Ground Task Force (MAGTF). This will enhance mission capability while ensuring the safety of all combatant divers whether training for or conducting combat operations. Because the Navy no longer supports routine confirmatory underwater beach reconnaissance missions to the high water mark or those carried out within rivers, bays and estuaries, responsibility for the conduct of such missions now resides with deployed Marine Reconnaissance Forces.

OPERATIONAL IMPACT

The THSE provides state-of-the-art navigation and underwater mapping capability, integrating Global Positioning System, Doppler sonar and computer technology to provide Marine combatant dive teams with the capability to conduct tactical sub-surface hydrographic reconnaissance by electronically charting bottom conditions of the seaward approach to littoral penetration points in support of the MAGTF. Currently, combatant divers rely on 1940's era tools and techniques to conduct hydrographic surveys and provide confirmatory beach reports. This entails using a plumb line, and a writing board to log data.

PROGRAM STATUS

The THSE is in the technology development phase of the acquisition life cycle. Defense Advanced Research Projects Agency (DARPA) is providing the research and development funding and project management through fiscal year 2008. During fiscal year 2008 and fiscal year 2009, DARPA and the Marine Corps Systems Command will be conducting performance testing and evaluations to determine its ability to meet all performance requirements. THSE is planned to be procured and fielded in fiscal year 2010 and fiscal year 2011.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Honeywell/TRDI

TOPOGRAPHIC PRODUCTION CAPABILITY (TPC) FAMILY OF SYSTEMS (FOS)

DESCRIPTION

The Topographic Production Capability (TPC) is the only Marine Corps' Family of Systems (FoS) that provides an integrated, independently deployed, self-contained Geospatial Information System designed for data acquisition, manipulation, analysis and dissemination. It provides the commanders and staffs with Geospatial Intelligence (GEOINT) support to all levels of the Marine Air Ground Task Force (MAGTF).

The TPC FoS provides the capability to task, collect, process, exploit, analyze, produce, store, and disseminate all-source GEOINT information as a foundation for the Common Operational Picture/Common Tactical Picture for the MAGTF. TPC provides an extensive reach-back functionality to intelligence agencies (National Geospatial Agency, Central Intelligence Agency, Defense Intelligence Agency), as well as reach-back to the Marine Corps Intelligence Activity (MCIA). TPC also enables reach-back to its parent Topographic Platoon, theater Joint Intelligence Centers, and Joint Analysis Centers for specialized capabilities (i.e., data extraction) in addition to collaborative analysis and/or production.

The TPC FoS provides critical, timely, and accurate digital and hardcopy GEOINT to support mission planning and execution. The TPC FoS provides a flexible and extensible data management framework to support the capturing of both unstructured and structured GEOINT data that will allow data to be organized and "tagged" for later use in data interoperability, data discovery and data fusion.

The TPC FoS consists of the Marine Corps Geospatial Information Library (MCGIL), Tactical Geospatial Information Library (TGIL), the Deployable Geospatial Information Library Server (DGIL/S), the Deployable Geospatial Information Library Workstation (DGIL/W), the Digital Terrain Analysis Mapping System (DTAMS), the Digital Terrain Analysis Mapping System – Light (DTAMS-L) and the Geodetic Survey Set (GSS).

The TPC FoS requires amphibious task force afloat connectivity when deployed with a Marine Expeditionary Unit (MEU) or a Marine Expeditionary Brigade afloat.

OPERATIONAL IMPACT

The TPC FoS is the only tactical system in the Marine Corps inventory, which satisfies the Marine Corps GEOINT requirements across the doctrine, organization, training, material, leadership, personnel and facilities spectrum. The TPC FoS is used by the Topographic Platoon of the Marine Expeditionary Force (MEF), providing deployable modules to the Major Subordinate Commands and the MEU. It may also be used to support the Commander, Joint Task Force or Marine Component Commander.

The TPC FoS provides the capability to scale up or down, depending on the type of mission, size of the force along with specified geospatial requirements. The TPC FoS is a transportable, highly mobile, modularized network of systems

that allows the commander to exercise near real-time control, coordination and direction of MAGTF geospatial and geographic intelligence production operations. The TPC FoS supports the following:

TPC FoS facilitates the Marine Corps concept of Expeditionary Maneuver Warfare by providing Commanders/Squad leaders improved battlespace visualization and common understanding.

TPC FoS supports the transition to irregular warfare by helping to build tailored made products of cities that readily identify religious, historical and cultural landmarks. Additionally TPC FoS supports Distributed Operations by building tailored made products for individual teams.

The employment of TPC FoS in Operation Iraqi Freedom and Operation Enduring Freedom continues to grow exponentially by providing tailored made geospatial products of cities, areas of operation and road networks to squad leaders up to the MEF Commanding General.

TPC FoS is completely interoperable with other Marine Corps systems, other services and Commonwealth forces.

TPC FoS supports all phases of Operational Maneuver from the Sea, Sustained Operations Ashore, Ship-To-Objective Maneuver and other Expeditionary Operations.

PROGRAM STATUS

The TPC FoS has been fielded to I, II, III MEFs, MCIA and the School of Geospatial-Intelligence. Additionally, TPC FoS components have been assigned to each of the Marine Divisions, the Marine Logistics Groups, the Chemical Biological Incident Response Force in Indian Head, MD, and the Marine Corps Special Operations Command. TPC FoS has been designated as an Acquisition Category IV(M) Program and is post Milestone "C," meaning it is in the production and deployment phase by finalizing the 19 DTAMS-L in the inventory. The TPC FoS program office has satisfied the Urgent Universal Need Statement requirement by completing the fielding of 17 DTAMS-L to the Operational Forces in the 3rd Quarter (Qtr) of fiscal year 2007. The current fielded systems will be refreshed during fiscal year 2008, enhancing the current residential capability.

Procurement Profile: Quantity:	FY2008	FY2009
TGIL	0	0
DGIL-S	0	0
DGIL-W	0	0
DTAMS	0	0
DTAMS-L	19	0
GSS	0	0

Developer/Manufacturer:
Optia, Dell

Hardware/Software Integrator: Northrop Grumman Information Technology, TASC, Chantilly, VA

USMC NETWORK OPERATIONS (NETOPS)

USMC Network Operations (NetOps) is the Marine Corps-wide operational, organizational, and technical construct for operating and defending the Marine Corps Enterprise Network (MCEN) from the core to the tactical edge. NetOps is defined as the integrated planning and employment of military capabilities to provide the friendly net environment needed to plan, control and execute military operations and conduct Service functions. It involves time-critical, operational-level net security. NetOps relies on the understanding, application, and integration of information technology, technology standards, and standard processes that provide traditional systems and network management (Fault Management, Configuration Management, Accounting Management, Performance Management, and Security Management); information and infrastructure protection; and the ability to maneuver information across Global Information Grid terrestrial, space, airborne and wireless environments. NetOps is conducted at all levels of command (strategic, operational, and tactical) and influences all core constituents of the MCEN: communications infrastructure, computing, information assurance, and enterprise services. It provides commanders with MCEN Situational Awareness and MCEN C2 capabilities through the integration of Enterprise Management, Net Defense, and Content Management.

Marine Corps Network Operations and Security Center (MCNOSC) is the Corps' nucleus for executing the NetOps mission including enterprise network services, network support to deploying forces, technical development of network-enabled IT solutions, and providing the Marine Corps with a responsive, cohesive, and formidable global network defense capability. As the pervasive threats to our network grow while the complexity of the network evolves in support of net-centric capabilities, the MCNOSC leads the defensive fight against the enemy and provides the means by which to integrate the network into a single weapons system. The MCNOSC performs the first two of the three NetOps Essential Tasks. Marine Corps Enterprise Information Technology Services (MCEITS) handles MCEN Content Management.

MCEN ENTERPRISE MANAGEMENT

MCEN Enterprise Management (MEM) is the functional capabilities and operational processes necessary to monitor, manage, and control the availability, allocation, and performance within and across the MCEN. MEM includes Enterprise Services Management, Application Management, Systems Management, Network Management, Computing Infrastructure Management, Satellite Communications Management, and Electromagnetic Spectrum Management. MCNOSC performs MEM via the following initiatives:

- ***Operations Center*** monitors and maintains situational awareness of MCEN operations 24 X 7
- ***Defense Messaging System Central Operations Center***
- ***Expeditionary Support*** team provides

network support to deploying or deployed Marine forces
- ***Mainframe Enterprise Services*** provides mainframe management and support
- ***Network Operating System*** standardization and support for the enterprise
- ***Marine Corps Circuit Management Office***
- ***E-LMR*** engineering and technical support
- ***Network Plans and Engineering*** evaluates and develops network-based technical solutions and capability improvements in support of the warfighter mission.

MCEN NETWORK DEFENSE

MCEN Network Defense (MND) is the set of functional capabilities and operational processes necessary to protect and defend the MCEN. This includes Computer Network Defense with associated Response Actions, Critical Information Protection, and the operational management of Information Assurance capabilities. MND activities consist of the policies and procedures that prepare systems, networks, and personnel to protect information. The following MCNOSC initiatives contribute to the MCEN net defense mission:

- ***Marine Corps Computer Emergency Response Team*** enables global network operations of the MCEN through protection, detection, and effective net defense response actions
- ***Marine Corps Information Assurance Red Team***
- ***Public Key Infrastructure*** enterprise operations
- ***Infrastructure Security*** personnel operate and control Point of Presence equipment at all MCEN Boundaries
- ***Vulnerability Management Team***

MCEN CONTENT MANAGEMENT

MCEN Content Management (MCM) is the set of functional capabilities and operational processes necessary to monitor, manage, and facilitate the visibility and accessibility of information within and across the MCEN. MCM maneuvers information across the Enterprise, focusing on positioning and repositioning of content to satisfy mission needs. MCM involves compiling, cataloging, caching, distributing and retrieving data, managing information flow to users, and enabling the execution of the commander's information dissemination policy. MCM enables information users to define and set information needs (profiles) to facilitate timely information delivery and to search information databases and retrieve required products.

MCM capabilities will be largely provided through MCEITS initiative. MCEITS will provision several Enterprise Information Technology Centers as well as a number of 'Distributed Platforms' and deployable 'Expeditionary Platforms' that will constitute the Marine Corps Enterprise Applications Environment. MCEITS will also provide a USMC Portal Solution. USMC applications and data will be hosted and stored within this environment and made available through the portal. The MCEITS Operations Center will work with its customers, mainly the USMC Functional Area Managers in deriving application hosting and portal solutions that ensure that required data and services are available to the right users in the right locations at the right time.

ANGEL FIRE (AF)

DESCRIPTION

Angel Fire (AF) is a wide field of view persistent surveillance (WFVPS) aerial collection asset. AF was primarily developed by engineers at the Air Force Research Laboratory (AFRL) and Los Alamos National Laboratory (LANL). Its capabilities were demonstrated to the Marine Corps throughout 2006 during Mojave Viper exercises in Twenty-nine Palms, CA. Recognizing the utility of a near-real time (NRT) WFVPS sensor, the Marine Corps became AF's service sponsor. AF is a material solution to Marine Forces' articulated lack of dedicated persistent surveillance assets in the Iraqi theater of operations. In late 2006, the Marine Corps, together with AFRL and LANL, obtained both Joint (via the Joint Improvised Explosive Device Defeat Organization) and service funding for an operational assessment of AF.

Angel Fire was designed to provide a dedicated, NRT imagery sensor and distribution system to commanders and units at the tactical level. The WFVPS grid coverage is superior to current Unmanned Aerial Systems (UAS) in that a typical UAS images a relatively small constantly changing area as the air vehicle moves. AF provides a larger, persistent, geo-rectified image with archival capability. While it's wider angle lenses typically result in a loss of detail when compared to a UAS, AF's sensor design and software mitigates this limitation. AF is able to maintain an approximate .5 meter ground sampling distance, a resolution sufficient for identifying dismounted personnel. AF's current configuration consists of the following:

- A manned aerial platform with a belly mounted electro-optic sensor. The long-term goal is to mount the WFVPS sensor package on a UAS.
- The ground receive station, servers, and workstations enable analysts to view data within a ten second latency period at a rate of 1-2 frames per second.
- One or more servers allow analysts to access the imagery in small, user-defined packets thereby minimizing bandwidth requirements. Multiple users may also simultaneously access data independent of each other.
- Stored data is accessible in the same manner as the NRT data; imagery storage is only limited by user requirements and disk space.
- The workstation allows the analyst/viewer to interface with the sensor via controls for zoom, pan, tilt, and the imagery's speed.
- A "TiVo-like" rewind function enables access to archived data in order to facilitate forensic and post-event analysis. This capability provides value added to the tactical commander operating in an irregular warfare environment.

OPERATIONAL IMPACT

As a dedicated WFVPS capability, AF provides tactical commanders with enhanced situational awareness and more precise targeting, thereby increasing operational flexibility, speed, and lethality. AF also enables additional flexibility in managing low density/high demand intelligence, surveillance, and reconnaissance assets.

PROGRAM STATUS

AF began its operational assessment in support of MNF-W in August 2007.

This WFVPS capability was fielded in response to an urgent requirement for a dedicated, near real time, imagery sensor and distribution system with forensic capability for tactical level (i.e., battalion) commanders and units.

Procurement Profile:
This is one (1) suite, consisting of four (4) sensors, deployed in Operation Iraqi Freedom. The purchase and deployment of additional sensors depend upon operational force feedback and the technical readiness of enhanced capabilities.

Developer/Manufacturer:
Air Force Research Laboratory, Los Alamos National Laboratory, CA

GLOBAL COMMAND AND CONTROL SYSTEMS-INTEGRATED IMAGERY AND INTELLIGENCE (GCCS-I3) INITIATIVE

DESCRIPTION

The Global Command and Control Systems-Integrated Imagery and Intelligence (I3) Initiative, (GCCS-I3), is a joint program in which the Marine Corps participates. The program enhances operational commanders' intelligence-situation awareness and track management. It uses a standard set of integrated tools and services to maximize commonality and interoperability across the tactical, theater, and national communities. The GCCS-I3 operates in joint and service-specific battlespace, and is interoperable, transportable, and compliant with the Common Operating Environment (COE).

OPERATIONAL IMPACT

The GCCS-I3 is the core software for the Intelligence Analysis System Family of Systems, which is the senior system in the System-of-Systems concept. The GCCS-I3 Initiative works to ensure that the systems' software is interoperable with the Marine Corps communication and data transmission systems. Several Marine Corps Intelligence Systems uses GCCS-I3 as their core software and/or individual segments as major components of their software baseline, including:

- Technical Control and Analysis Center (TCAC);
- Topographic Production Capability (TPC);
- Tactical Exploitation Group (TEG);
- Counterintelligence/Human Intelligence (HUMINT) Equipment Program (CIHEP);
- Tactical Remote Sensor System (TRSS);
- Joint Surveillance Target Attack Radar System (JSTARS); and
- Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES).

PROGRAM STATUS

The GCCS-I3 Initiative has several long- and short-term goals to enhance the interoperability and procurement decisions for Marine Corps intelligence systems. In the long-term, this program seeks to achieve an integrated, fully interoperable Marine Corps Intelligence System-of-Systems. In the near-term, the program seeks to establish a process, and a corresponding set of procedures, designed to allow the Marine Corps to make informed procurement decisions in its efforts toward achieving the long-term goal. The GCCS-I3 effort has four mission areas: Administration and Infrastructure Support; Program Manager-Level Configuration Management Processes and Functions; Science and Technology Engineering Support; and, Integration Support Team.

Procurement Profile:	FY2008	FY2009
Quantity:	0	0

Developer/Manufacturer:
Various

TACTICAL REMOTE SENSOR SYSTEMS SYSTEM-OF SYSTEMS (TRSS SOS)

DESCRIPTION

The Tactical Remote Sensor Systems (TRSS) System-of-Systems (SoS) program provides unattended sensors, retransmission systems, and sensor monitoring systems. TRSS are deployed and operated by Ground Sensor Platoons in support of the commander's intelligence collection effort. Once deployed, the remote systems operate autonomously, providing continuous, unattended surveillance of distant areas of the battlespace. TRSS is frequently employed to provide surveillance and reconnaissance in places where it is too dangerous to maintain personnel or not tactically practical to deploy other surveillance systems. Remote sensors use multiple sensing modalities and radio communications methods to detect and report personnel and vehicle activity in designated areas of interest. All sensors are passive; detection is accomplished when target-generated energy is sensed. Current detection modalities include seismic, acoustic, magnetic, and imaging (thermal and electro-optical). Future modalities will include radio frequency, ultra-wide band, and electromagnetic.

OPERATIONAL IMPACT

TRSS enables commanders to continuously monitor areas of interest without leaving Marines in high risk locations. The information provided by the sensors can be used to cue higher level surveillance systems (such as unmanned aerial systems) and gathered by Intelligence Analysis Systems for further analysis. The program executes an incremental acquisition strategy to continuously improve the system's capability to discriminate target activity and report relevant targets in a timely manner.

PROGRAM STATUS

TRSS is a post milestone C program (production and deployment phase) and is currently undergoing a technology refresh which will enhance the current capabilities of the existing Standard Operating Procedures. These enhancements include longer range imagers, improved, networked communications, and up-armored mobile monitoring stations that have a smaller footprint. The fielding plan for TRSS was recently increased from 23 to 33.

Procurement Profile:	FY2008	FY2009
Quantity:		
Thermal Imagers	344	20
Electro-optical Imagers	344	20
Mobile Monitors	21	0
Sensor Sets	10	11
Hand Held Programmer	40	0
Radio Repeaters (Relay)	130	429
Maintenance Kits	3	0

Developer/Manufacturer:
L-3 NOVA Engineering, Cincinnati, OH
L-3 Communications East Camden, NJ
SPAWAR Systems Center, Charleston, SC
Apogen-QinetiQ North America, Carlsbad, CA